DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY, EUROPE, AND SEVENTH ARMY
HEADQUARTERS ALLIED LAND COMPONENT COMMAND HEIDELBERG
UNIT 29351
APO AE 09014-9351

S: 15 September 2005

AEAGA-S 15 August 2005

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Army in Europe 2005-2006 Winter Safety Campaign

This memorandum expires 1 May 2006.

1. REFERENCES
Enclosure 1 lists references.

2. PURPOSE
The Army in Europe 2005-2006 Winter Safety Campaign will run from 1 October 2005 through 30 April 2006. European winters present a wide range of very dangerous and lethal hazards. These range from carbon monoxide poisioning, to black highway ice, to the air and ground hazards of dangerous winter weather—cold and precipitation. The purpose of this campaign is to reduce the potential for accidental injury and death to our Soldiers, civilians, and local national employees, and to preserve assets. This campaign will continue to emphasize deployment and redeployment risk management as we once again execute movements in the middle of winter in Europe. The campaign motto remains *Don't Walk By*. Remember, if you walk by a dangerous condition in which Soldiers are involved, you have set a new (and lower) standard. Do not do this. Fix the problem on the spot.

a. This campaign builds on the successes of previous campaigns. Previous campaign initiatives are summarized in enclosure 3, tab K. More information is posted on the USAREUR Safety website at *http://www.per.hqusareur.army.mil/services/safetydivision/usareur_winter_safety_campaign.htm*.

b. This memorandum—

(1) Provides the 1st and 2d quarter FY 06 theater-level risk assessment for senior leaders and defines mandatory emphasis areas for this period.

(2) Includes risk-assessment tasks associated with Global Rebasing and Restationing as we approach the execution phase.

(3) Must be used with AE Pamphlet 385-1.

c. The Winter Safety Campaign continues with the initiative to baseline unit safety programs and incorporate composite risk assessment and management into everything we do. This is our top priority and it means maintaining command presence and implementing safety programs from the top down to the troop level. In accordance with paragraph 4a(1), commanders will send their safety-program implementation directives to the USAREUR G3 by 15 September 2005.

d. By now, all commanders must have a baselined safety program and units must have achieved unit safety certification. As redeploying units retrain to standard, they must complete unit safety certification as part of their retraining tasks. In addition, the *Under the Oak Tree* communication process between first-line leaders and junior Soldiers—which is fundamental to the well-being of our force—must continue.

e. We will concentrate on the first two fiscal quarters of FY 06 and proactively target our major foreseeable risks for this period. I will revise the risk assessment every 6 months, taking into account the direction and posture of this command. I will also continue to emphasize programs that reduce risk in the workplace. As we begin Global Rebasing and Restationing implementation, workforce protection in theater will become a major part of our safety program. Please continue to concentrate on implementing all-encompassing safety programs. As I adjust campaign elements, you must maintain this program while considering all elements: garrison, mission, and tactical. By now, previous campaign emphasis areas should be second nature. I expect that your efforts under this campaign will have similar results.

f. We will concentrate on the following targeted tasks during the upcoming campaign. These tasks may be supplemented or adjusted according to mission requirements by the first general officer in the chain of command:

(1) Winter training hazards and risk mitigation.

(2) Carbon monoxide poisoning (tents, containers, vehicles, and other enclosed spaces).

(4) Hazards of black ice in winter.

(5) Cold-weather injuries and prevention techniques.

(6) Emphasis on flightcrew transition to instrument flight task proficiency (aviation units and commands with subordinate aviation units / activities).

(7) Equipment winterization.

(8) Global Rebasing and Restationing activity risk assessment and posturing.

(9) Ionizing radiation equipment inventory and control.

(10) Preparing personnel to function in the European winter environment.

(11) Unit driver training self-evaluation and program improvement.

(12) Winter-driver orientation.

g. To accomplish the tasks in subparagraph f above, USAREUR major subordinate commands (MSCs) will classify all subordinate units into one of the following categories. Enclosure 3 provides the safety program intent for each category.

(1) Balkans-based units.

(2) Garrison-based units, including rear detachments, except for units based in the Balkans.

(3) Redeploying, reintegrating, reconstituting, and retraining (R4) units.

(4) Units identified to deploy to Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), or another tasked mission or exercise.

3. CURRENT ASSESSMENT

a. The Army continues to support the Secretary of Defense goal of reducing the number of accidents by 75 percent by the end of FY 08. To significantly reduce accidents in the Army in Europe, we must target vehicle crashes and personal injuries, both on and off duty. Our integrated safety program was recently reviewed by the Department of the Army Inspector General, the Office of the Assistant Secretary of the Army for Installations and the Environment (Safety), and internally by the USAREUR Inspector General. We have a good reputation. That reputation is built on fundamental program basics and putting the business of taking care of Soldiers first. That is my intent as you continue to work through these campaigns.

b. I transmit Bell Sends and Army preliminary loss reports to keep you aware of the magnitude of the carnage in our Army. These tools provide an immediate insight into how we are losing Soldiers. As you read through them, ask yourself, “How would this happen to one of my Soldiers?” Here is what I have observed:

(1) Drivers of privately owned vehicles (POV) and motorcycles often deviate from the standard with respect to speed, environmental conditions, and their personal capability, which leads to accidents. Commanders should be particularly concerned with motorcycle drivers in the grades of specialist, sergeant, and staff sergeant. Sergeants and staff sergeants are of particular concern, because these Soldiers should be serving as mentors to more junior Soldiers. We must ensure that these leaders receive the same degree of communication and assistance that our younger Soldiers receive.

(2) Effective Army motor-vehicle and combat-vehicle driver training is critical.

(3) Defensive driving must be part of our driver training programs.

(4) Seatbelts save lives on the highways and under wartime mission conditions.

(5) Rollover drills, like seatbelts, save lives.

(6) We will continue to integrate with high-quality troops from other theaters; therefore, we must see and understand the Army's full spectrum of safety challenges. To do this, we must assess the full Army composite-risk spectrum to prepare for the next operation. We must not concentrate only on internal risks.

c. Weapon-muzzle discipline needs improvement. Range safety experts are constantly watching for violations of muzzle discipline. Armed personnel at checkpoints are often observed holding their weapons horizontally or pointed outward. Leaders must recognize this as a failure to meet standards. We must maintain garrison discipline in a peacetime environment to the same high standard as we do while on patrol.

d. Detailed assessments for ground operations, POVs, and aviation operations are in enclosure 2. In summary, our risks are as follows:

(1) Ground. The Army and the Army in Europe continue to see the following trends, which are targeted in this campaign:

(a) Army vehicle crashes are our number-one accidental dollar loss and the number-one killer in combat operations.

(b) Off-duty POV crashes, including motorcycle crashes, continue to be the number-one killer of Soldiers in the Army in Europe and throughout the Army.

(c) Sports and physical activity continue to be the number-one causes of serious injuries.

(2) Aviation. In the central region, USAREUR continues to have a respectably good aviation safety record. Our major aviation problems have traditionally included running into obstructions and maintaining effective crew coordination during mission execution. However, incidents of poor crew coordination are on the rise. We have also had several "minor" incidents involving issues such as power management that were close to having serious consequences. We need to regain control of deviations from the standards. The Army continues to see additional trends, which are also addressed in this campaign.

(a) Hitting the ground and objects has traditionally been the number-one aviation killer in USAREUR and our number-one cause of dollar loss. A disturbing trend is developing with aircrew difficulty in recovering from inadvertent instrument meteorological conditions (IMC). This problem was recently highlighted by two high-profile crashes.

(b) In USAREUR, the AH-64 has the highest accident rate. Outside USAREUR, the UH-60 continues to have the highest accident rate, followed closely by the OH-58D.

(c) Human factors have been cited in over 85 percent of USAREUR aviation accident findings. Individual and leader failures continue to be the biggest contributors to USAREUR aviation accidents.

e. Significant mission-area training countermeasures include the following:

(1) Unit Army motor-vehicle and combat-vehicle driver training program assessment and update.

(2) Deployment and redeployment operations training, including convoys, vehicle and container loading, hazardous material certification, rail-loading and unloading operations, barge-site operations, and port-area operations.

(3) Composite risk management train-the-trainer courses and subsequently passing on the training.

(4) Supervisor training to perform job-hazard analyses.

4. RESPONSIBILITIES OF HQ USAREUR/7A STAFF OFFICES, USAREUR COMMANDERS, AND IMA-EURO

a. Commanders of USAREUR MSCs, Task Force Falcon (TFF) (Kosovo), Task Force Dayton (TFD) (Bosnia), and Headquarters and Headquarters Company (HHC), USAREUR; and the Director, IMA-EURO; will—

(1) Develop an FY 06 Winter Safety Program that implements the requirements of this memorandum. These programs require training conducted by unit commanders and other leaders. Training may be conducted using a local or regional "safety day" format with shared leader-instructor participation. Training requirements not met using the safety-day type of format will be incorporated into the MSC training schedule. Commanders will send their safety-program implementation directives to the USAREUR G3 by 15 September 2005.

(2) Review AR 385-10 and Army in Europe Command Policy Letter 3 to reacquaint themselves with the requirements of the Army Safety Program.

(3) Review previously directed campaign program elements to ensure their program is in compliance. The requirements and my intent are in enclosure 3, tab K.

(4) Assess organizational Army motor vehicle and nontactical vehicle (NTV) driver training programs and take action to strengthen their programs. The USAREUR G1 and the Seventh Army Training Command (7ATC) are preparing assessment tools and master driver training programs that parallel this campaign plan. Specific guidance will be published separately.

(5) Ensure that personnel and equipment are prepared for winter operations. This includes providing winter driving orientation as well as training on cold-injury prevention, the proper use of combustion heaters, road conditions and communication procedures, the use of tire chains, and hazards of carbon monoxide gas in tents, vehicles, and other enclosed spaces. Commanders will also encourage POV owners to participate in the Vehicle Lighting Campaign and will implement a similar unit program for military vehicles.

(6) Train for deployment and redeployment operations. This includes training on vehicle and container loading and securing, hazardous material segregation and load certification, railhead operations, barge-port operations, seaport operations, and escort or supercargo operations, as applicable. Subordinate units involved with rail-loading and unloading operations, and rail security and escort teams must clearly understand that overhead powerlines are deadly. It is forbidden to climb on a railcar once loaded until the car has arrived at the unloading site and the overhead power is verified as being off.

(7) Train to understand deployed operational area safety risks and adopt or develop countermeasures. Task force commanders should make efforts to learn the accident history of tasked subordinate and close horizontal units.

(8) Emphasize flightcrew training tasks for transition to IMC and verify accomplishment to standard in accordance with respective airframe aircrew training manuals.

(9) Initiate or tailor risk assessments for Global Rebasing and Restationing implementation operations and identify material requirements and personnel training needs.

(10) Continue conducting job-hazard analyses for civilian and local national employees according to the USAREUR 2005 Summer Safety Campaign. The overall target date for completing these analyses is 30 September 2006. This process and any associated medical surveillance go together with Global Rebasing and Restationing risk assessment and management. MSC commanders will report progress on 15 January 2006 and 15 April 2006 to the USAREUR Safety and Occupational Health Office in accordance with the procedures at *http://www.per.hqusareur.army.mil/services/safetydivision/usareur_winter_safety_campaign.htm*.

(11) Ensure that Soldiers and civilian employees receive training on the topics in this campaign and that a process is in place to teach family members about relevant subjects. Family readiness groups can be used to reach family members.

(12) Ensure that safety goals are included as a rating element of subordinate leaders.

(13) Continue to observe the following fundamental campaign tenets:

(a) Sustain momentum and emphasis throughout the campaign.

(b) Ensure all leaders reaffirm their commitment to safety through words and deeds.

(c) Ensure that Soldiers embrace the Warrior Ethos and hold Soldiers accountable for violating standards or not upholding Army ethics and values.

(d) Conduct noncommissioned officer development programs (NCODPs) and officer professional development (OPD) programs that train leaders for successful implementation and continued support of this campaign. Senior leaders will mentor junior leaders, and junior leaders will execute the tasks in this campaign. These tasks will not be delegated to a base support battalion, but cooperative programs are encouraged. This campaign will be executed through the chain of command and every tasking should involve three-deep leadership providing clear direction, professional mentoring, and supervision down to coordinated execution at the junior-leader level.

(e) Evaluate subordinate units in their execution of this campaign.

(f) Ensure subordinates are completing and submitting reports on accidents and do not tolerate exceptions to this regulatory requirement.

(g) Refer to AE Pamphlet 385-1 for off-duty safety themes during the campaign months.

(h) Record and report lessons learned on safety-related issues to the USAREUR G3 and the USAREUR Safety and Occupational Health Office.

(i) Reinforce positive behavior with individual and unit awards. Nominations for the Certificate of Merit for Safety (USAREUR Reg 385-55) are due by 30 December each year.

b. The USAREUR Safety and Occupational Health Office will—

(1) Evaluate MSC safety programs for compliance with this memorandum.

(2) Develop and field a unit self-assessment tool that enables commanders to identify the strengths and weaknesses of unit driver training program.

(3) Integrate tools of the web-based United States Army Combat Readiness Center Accident Report Automation System (ARAS) and the Risk Management Information System (RMIS) into the Combined Arms Training Center 40-hour Safety Officer/NCO Course (SOC 40) program of instruction.

c. The USAREUR G3 will—

(1) Provide safety and standardization compliance assistance to aviation units returning to the central region from OEF and OIF.

(2) Conduct deliberate, composite risk assessments of all deployment and redeployment operations to ensure all modes of transportation are considered and the risk is minimized.

(3) Monitor the status of airfields and helipads to ensure that administrative and safety oversight is maintained during unit realignment.

d. The CG, 7ATC, will—

(1) Develop and field a new Army motor vehicle master driver training program that includes current vehicle series and types and their associated risks derived from current operations and lessons learned.

(2) Provide challenging, risk-based scenarios at the Combat Maneuver Training Center and continue to grade rotating units on the following:

(a) The use of composite risk-management techniques.

(b) Weapons discipline.

(3) Continue to integrate current-event composite risk management into USAREUR leadership courses, such as the Primary Leadership Development Course, Noncommissioned Officer Academy, Company Commander/First Sergeant Course, Senior Pre-Command Course, and Rear Detachment Commanders Course.

e. The Director, IMA-EURO, and Commanders, TFF and TFD, will—

(1) Review planned winter recreational activities, such as festivals and morale, welfare, and recreation (MWR) events, to ensure cold-weather risk management is used and appropriate controls are in place.

(2) In coordination with facility coordinators, assess snow- and ice-removal plans to minimize personal injuries involving slips and falls on frozen surfaces.

(3) Help deploying and redeploying units with railhead-training certification.

(4) Assist tenant organization safety-day events, supporting hands-on programs in garrison.

f. The Director, IMA-EURO, will—

(1) Help tenant organizations with job-hazard analyses by providing software and technical instruction. Assessing individual jobs remains the responsibility of the tenant supervisor.

(2) Review NTV driver education and licensing to identify potential improvements that will reduce NTV accidents, and send the results of the review and a proposed improvement plan to the USAREUR G1 by 15 January 2006 for USAREUR coordination.

(3) Coordinate with area support groups (ASGs) for support of this campaign.

(4) Publish winter-safety articles in local community newspapers and media beginning on 1 September 2005. Articles should be tailored to the community.

(5) Emphasize moderation in alcohol consumption and the use of designated drivers and ride-home programs. MWR activities will promote the designated-driver program.

(6) Ensure adequate Motorcycle Safety Foundation (MSF) courses are provided to support the MSF training requirements of this campaign.

(7) Emphasize suicide prevention and outreach.

(8) Ensure MWR activities conduct risk assessments of all sponsored winter activities according to AR 215-1. MWR managers should use self-inspection forms to detect unsafe practices and conditions.

g. The Chief, Public Affairs, USAREUR, will—

(1) Publish campaign safety information in appropriate media beginning 1 September 2005 and continuing through 30 April 2006.

(2) Publicize the *Click It or Ticket* and *Booze It and Lose It* campaigns before long holiday weekends throughout the winter.

h. The Provost Marshal, USAREUR, will—

(1) Coordinate with IMA-EURO and ASGs to enforce road standards for vehicles and operators, including *Click It or Ticket*, *Booze It and Lose It*, and sobriety-test programs, and provide feedback on results to me and to area senior tactical commanders.

(2) Within 24 hours after a fatal POV or motorcycle crash, provide information on the crash site or relevant digital photographs of the vehicles involved to the USAREUR Safety and Occupational Health Office for use in Bell Sends messages. This task must be completed with maximum effect, but with respect for and regard to the privacy of those involved.

5. SUMMARY

Winter training, operations, and off-duty activities are particularly hazardous in Europe. We are an Army at war and over this upcoming winter, units will be on the move. Also, as we begin the first major part of Global Rebasing and Restationing, I need your complete commitment to take care of our Soldiers, civilians, and family members. We must be aggressive and innovative in our search for, definition of, and elimination of risks. We cannot wait until the 11th hour, nor can we rely on a simple "check-the-block" exercise. We must be proactive and involve the entire chain of command. Give this campaign equal priority with other competing issues. Leaders at all levels are responsible for the safety of their personnel. Together we will make this a safe and enjoyable winter for all our Soldiers, civilians, and family members as we continue to execute with excellence Any Mission, Anywhere.

Enclosures:
1. References
2. Risk Overview
3. Program Matrix

B. B. BELL
General, US Army
Commanding

DISTRIBUTION:
Commanders:
USAREUR MSCs
TFF and TFD
HHC, USAREUR
HQ USAREUR/7A Staff Principals
Director, IMA-EURO

REFERENCES

1. PUBLICATIONS

Code of Federal Regulations

Code of Federal Regulations, Title 29, part 1910.132, subpart I, Personal Protective Equipment

DOD Publication

DOD Instruction 6055.4, DOD Traffic Safety Program

Army Regulations

AR 11-9, The Army Radiation Safety Program

AR 40-5, Preventive Medicine

AR 40-66, Medical Record Administration and Health Care Documentation

AR 95-1, Flight Regulations

AR 215-1, Morale, Welfare, and Recreation Activities and Nonappropriated Fund Instrumentalities

AR 385-10, The Army Safety Program

AR 385-55, Prevention of Motor Vehicle Accidents

AR 385-63, Range Safety

AR 385-64, U.S. Army Explosives Safety Program

AR 385-95, Army Aviation Accident Prevention

AR 600-85, Army Substance Abuse Program (ASAP)

AR 608-18, The Army Family Advocacy Program

AR 672-20 and AE Supplement 1, Incentive Awards

AR 672-74, Army Accident Prevention Awards Program

Army Pamphlets

DA Pamphlet 385-64, Ammunition and Explosives Safety Standards

DA Pamphlet 600-70, Guide to the Prevention of Suicide and Self-Destructive Behavior

DA Pamphlet 710-2-1, Using Unit Supply System (Manual Procedures)

Field Manuals

FM 4-02.17, Preventive Medicine Services

FM 4-25.11, First Aid

FM 21-20, Physical Fitness Training

FM 100-14, Risk Management

Miscellaneous Publications

Technical Manual (TM) 9-4520-257-12&P, Operators and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Heater, Space, Radiant, Large (H-45) (Type I, Solid Fuel) (NSN 4520-01-354-1191) (Type II, Liquid Fuel) (4520-01-329-3451)

TM 10-4500-200-13, Operators, Organizational and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Heaters, Space: Radiant-Type, Portable (Type I, Model 1941, Solid Fuel) (NSN 4520-00-257-4877); (Type II, Model 1941, Liquid Fuel) (4520-00-927-4214); (Yukon Model M1950, Solid or Liquid Fuel) (4520-00-287-3353); Heaters, Immersion: Liquid Fuel Fired for Corrugated Cans (all Makes and Models) (4540-00-266-6835) (Preway Model 447-2EX) (4540-00-453-9146) for Tank Trailer (all Makes and Models) (4540-00-266-6834)

TM 38-410, Storage and Handling of Hazardous Materials

Soldier Training Publication 21-1-SMCT, Soldiers Manual of Common Tasks Skill Level 1

TB MED 507, Heat Stress Control and Heat Casualty Management

Training Circular 21-3, Soldiers Handbook for Individual Operations and Survival in Cold-Weather Areas

Training Circular 21-305, Training Program for Wheeled Vehicle Accident Avoidance

Graphic Training Aid 08-06-012, Adverse Effects of Cold

Memorandum, HQDA, DACS-SM, 20 February 2004, subject: Sergeant Major of the Army Safety Award (*http://www.vcorps.army.mil/Safety/2004_SMA_SafetyAward.pdf*)

Army in Europe and USAREUR Regulations

AE Regulation 55-1, United States Army Motor Vehicle Operations on Public Roads

AE Regulation 55-4, Safe Movement of Hazardous Goods by Surface Modes

AE Regulation 95-1, General Provisions and Flight Regulations for Army Aviation

AE Regulation 190-1, Registering and Operating Privately Owned Motor Vehicles in Germany

AE Regulation 350-1, Training in the Army in Europe

AE Regulation 385-7, Respiratory Protection Program

AE Regulation 385-29, Safety and Occupational Health for Local National Employees in Germany

AE Regulation 385-40, Accident Reporting and Records

AE Regulation 600-8-101, USAREUR Soldier Readiness Program

AE Regulation 600-55, Driver- and Operator-Standardization Program

USAREUR Regulation 40-6, Referring Soldiers for Mental-Health Evaluations

USAREUR Regulation 385-55, Prevention of Motor Vehicle Accidents

USAREUR Regulation 385-64, USAREUR Explosives Safety Program

USAREUR Regulation 750-6, Ground Safety Notification System

Army in Europe and USAREUR Pamphlets

AE Pamphlet 385-1, Safety Themes

AE Pamphlet 385-15, Leader's Operational Accident-Prevention Guide

AE Pamphlet 385-15-1, Commander's Convoy Checklist and Risk Assessment

AE Pamphlet 385-15-2, Commander's Rail Operations Checklist and Risk Assessment

AE Pamphlet 385-15-3, Port Operations Checklists and Risk Assessment

AE Pamphlet 385-15-4, Sea and Supercargo Operations Checklist and Risk Assessment

AE Pamphlet 385-15-5, Leaders Guide to Force Protection in Physical Training Running Formations

AE Pamphlet 385-15-6, Risk Assessment

AE Pamphlet 385-15-7, Weapon Handling Procedures

Other Army in Europe Publications

Army in Europe Command Policy Letter 3, 4 May 2003, Safety

Army in Europe Command Policy Letter 28, 4 May 2003, Suicide Prevention

Memorandum, HQ USAREUR/7A, AEAGA-S, 10 May 2004, subject: Memorial Day Weekend—Summer Under the Oak Tree

2. BELL SENDS SAFETY MESSAGE SUMMARY

The following messages have been released since the date of the USAREUR 2005 Summer Safety Campaign. A complete list of Bell Sends messages is available in the Library of Army in Europe Publications and forms at *https://www.aeaim.hqusareur.army.mil/library/ltr/bell-sends/index-bsm.shtm*.

Bell Sends #19-05, SAFETY ALERT—Soldier Dies of Apparent Drug Abuse, 16 April 2005

Reiterates leader and individual responsibilities for intervention.

Bell Sends #20-05, SAFETY ALERT—Youth Electrocuted While Climbing on Railcar, 27 April 2005

Reminds of the dangers associated with and the prohibition against climbing on railcars, and urges parents to teach family members to stay off railcars.

Bell Sends #24-05, SAFETY ALERT—Two Soldiers Killed in Motorcycle Crash, 19 May 2005

Reiterates that crash severity is much higher with a motorcycle than a privately owned vehicle.

Bell Sends #25-05, SAFETY ALERT—Another Railcar Electrocution, 7 June 2005

Reiterates the direct order to stay off railcars after loading and before unloading.

RISK OVERVIEW

This enclosure provides an overview of ground, privately owned vehicle, and aviation assessments for the upcoming winter season.

Tab A: Ground Assessment. This tab provides lessons learned and risk-management information for personnel involved in ground operations other than aviation.

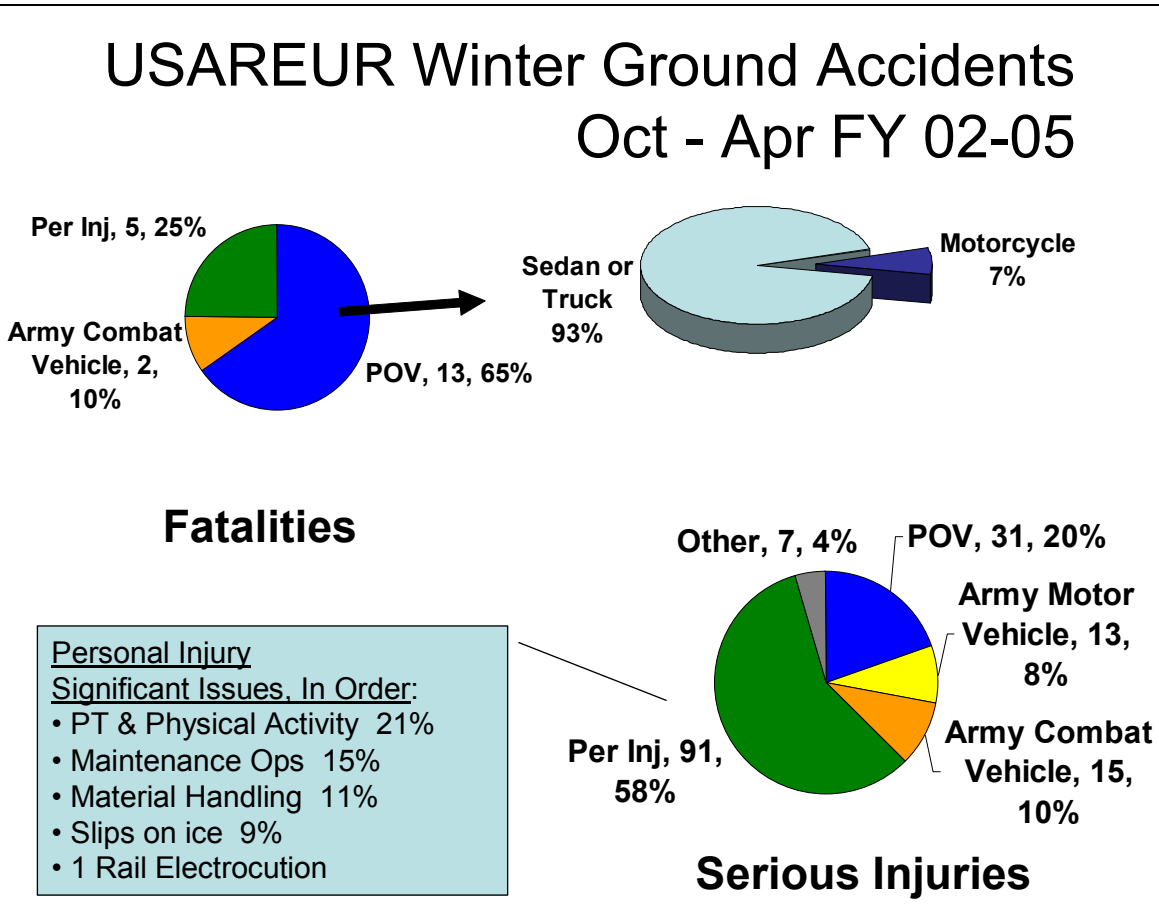
Tab B: Privately Owned Vehicle and Motorcycle Assessment. This tab provides lessons learned and risk-management information for operators of privately owned vehicles.

Tab C: Aviation Assessment. This tab provides lessons learned and risk-management information for personnel involved in aviation air and ground operations.

Tab D: Winter Training Hazards and Risk Mitigation. This tab provides a consolidated perspective of winter-specific risks to air and ground training operations.

GROUND ASSESSMENT

1. Purpose. This tab provides ground risk-management guidance to leaders for operations in the central region and the Balkans. This tab also describes primary ground operations and off-duty hazards, accident types, accident causes, safety issues, the prevention focus for first- and second-quarter FY 06 training and operations in the central region and the Balkans, and deployment and redeployment issues. It builds on the USAREUR 2005 Summer Safety Campaign analysis.



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2. Primary Accident Types and Hazards.

a. Privately Owned Vehicles (POVs) and Motorcycles. POVs and motorcycles crashes account for the highest number of fatalities and a significant number of overall injuries. A separate POV and motorcycle assessment is provided in this enclosure, tab B.

b. Military Vehicles. Accidents involving military vehicle operation account for highest dollar loss to USAREUR. The primary causes of these losses are as follows:

- **Speed:** Driving too fast for road conditions, manifested in crossing the center line or going off the hard pavement in a curve, losing control of the vehicle while passing or exiting the

roadway, and being unable to avoid a hazard. Vehicles with light rear ends, such as empty vans or pickup trucks, tend to fishtail on wet or otherwise slippery curves, or when accelerating or braking under slippery conditions. Placing auxiliary weight over the back axle can help prevent this problem.

- **Fatigue:** Falling asleep at the wheel or losing situational awareness. In addition to lack of sleep, both prescription and nonprescription medications can affect alertness and cause fatigue. The results of driving while drowsy include losing vehicle control, driving off the road, rear-ending a vehicle, or sideswiping vehicles or structures. Failing to follow a sleep plan or not modifying the sleep plan when the schedule changes results in fatigued personnel. The selection of a driver for a mission must consider the driver's capabilities. A co-driver may be warranted. The effects of sleep deprivation are as dangerous during personal time as they are in the field. Tab B to this enclosure discusses specific issues and concerns.

- **Failure to Recognize Hazards:** Failing to recognize approaching hazards and adjust driving accordingly. These hazards include intersections at the bottom of wet hills, curves, water on the road, soft shoulders, steep hills, deer- and other animal-crossing areas, and falling-rock areas.

- **Passing:** Failing to recognize the amount of time and distance required to pass, or passing on a blind curve or hill. This problem can generally be associated with people known to be impatient or intolerant of other drivers on the road.

- **Convoy Accidents:** Speeding to "catch up," taking risks in maintaining convoy integrity, poor communication, and getting lost. A large military vehicle with a lost driver is one of the most dangerous conditions for us and the local population. Congested areas, narrow streets, and high speeds do not allow for lack of attention. Searching for landmarks and preoccupation with instructions remove attention from maintaining situational awareness and control of the vehicle. U-turns are difficult and time-consuming for larger military vehicles, especially those with trailers, and can lead to collisions with local drivers.

- **Backing Accidents:** Failing to use or obey ground guides. Single-occupant nontactical vehicles, such as administrative vehicles or military police patrol cars, require special emphasis. Drivers must accept the inconvenience of stopping and getting out of their vehicle to check clearance. This is especially critical when operating a vehicle that is larger than one is accustomed to or that has a different field of view.

- **Mission Planning:** Failing to properly plan for the mission, including crew selection, reconnaissance, preparation, and hazard identification. The Automated Safety Management Information System (ASMIS-1) (encl 3, tab K) can be used to identify risks for the driver and the mission.

c. Personal Injuries. Injuries resulting from personal activity (personal injuries) are the major factor in accidental reasons for reduced job performance. They also account for a significant number of fatalities. This Army-wide trend is the same in the European theater. Personal injures account for the greatest number of accidents reported in the theater and are also very costly. Across the Army in Europe, the main causes of injuries over the last 5 years are as follows:

- Bone and muscular injuries resulting from sports and physical activity account for most personal injuries. Our most recent data shows ankle, knee, and leg injuries to be the most frequent, with resulting loss of mobility and primary duty accomplishment. Fatalities due to cardiovascular problems, heat, and strokes are affecting the regular Army, Reserve, and National Guard. So far this year, six Soldiers have died across the Army.
- Maintenance operation injuries relate predominantly to tool use, contact with moving parts, contact with sharp objects, and lifting or dropping heavy items.
- Material-handling injuries involve the crushing or cutting of body parts when lifting, pushing, or unintentionally dropping material. Body parts can become caught between objects during material-handling, maintenance activity, and when dropping heavy objects.
- Falls are a large cause of injuries. A very significant number of falls are a direct result of ice and snow. The remainder involves tripping over objects, on stairs, when mounting and dismounting equipment, or after losing one's balance in high places.
- The remaining significant injuries are those involving contact with hazardous materials, explosives, weapons, and other miscellaneous reasons.

3. Countermeasures.

a. Army Vehicles.

(1) After this campaign begins, the USAREUR Safety and Occupational Health Office will field a unit self-assessment tool that enables commanders to identify unit driver training program strengths and weaknesses. Seventh Army Training Command will implement a new master driver training program to support unit program improvement. Commanders will select and train drivers according to AE Regulation 600-55 and USAREUR Regulation 385-55, and enforce Army in Europe Command Policy Letter 3, using mission and individual driver-risk assessments. Tools such as the ASMIS-1 should be used. The USAREUR Safety website at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/amv_safety.htm* provides more tools.

(2) Critical to preventing POV collisions with military vehicles is civilian drivers being able to see slow-moving military vehicles on the road in front of them. Military vehicle delineator plates greatly improve nighttime vehicle recognition and are required on the rear of vehicles operating in the central region in accordance with USAREUR Regulation 385-55. Vehicles returning from deployment and overhauled vehicles must be fitted with these retroreflective devices before they may be driven on public roads.

b. Personnel.

- **Slips, Trips, and Falls.** To avoid slips, trips, and falls, wear footwear appropriate to the environment, clear or put salt or sand icy areas; watch where you walk; light your way; follow the "three points of contact" rule for maintaining balance; climb rather than jump down from equipment; walk rather than run up and down stairs; clean up spills; and use ladders that are large enough and appropriate for what you are doing.

- **Sports and Recreation Injuries.** In the Army in Europe, the activities with the highest number of serious injuries are divided fairly evenly among basketball, football, Frisbee, and running. During winter, leg, back, and head injuries also result from skiing and snowboarding. Sports and recreation injuries can be avoided through physical conditioning and acclimation, receiving instruction on the fundamentals of the sport and the "crawl, walk, run" approach to advanced skills, assessing and fixing the playing field before play, ensuring adequate lighting, avoiding horseplay, giving someone supervisory control if no referees are present, and avoiding alcoholic beverages when playing. Wear protective equipment appropriate to the sport or activity.

- **Finger Injuries.** To avoid finger and hand injuries, identify and avoid crush points in material-handling operations. Examples are between pallets and vehicle floors and walls, between slung loads and solid objects, and doors and hatches. Use pry bars or guide ropes instead of hands to control or position loads. Use an alignment tool instead of a finger when installing heavy equipment; keep fingers away from fans, fan belts, and similar mechanical equipment; remove rings before working to avoid catching them on objects and increasing the severity of injury; shut off equipment before putting your hand into a blind hole; use the right tool for prying or opening; cut away from yourself when using a knife; keep something between your fingers and the cutting action; ensure cutting tools are sharpened properly; and wear hand protection.

- **Back Injuries.** To avoid back injuries, warm up before strenuous activity, use legs to do the work when lifting heavy items and keep your back straight, get help lifting heavy items or use mechanical handling equipment, carry heavy objects close to your body, do not overextend your reach, and use a ladder rather than reaching for overhead objects.

- **Electric Shock.** Before conducting operations, look overhead to determine if wires are present. Assume all wires carry enough energy to kill on contact. One USAREUR Soldier was burned when he grabbed an antenna to free it from overhead wires. Another was seriously burned climbing on a railcar. Do not climb on parked railcars or railcar loads after they are loaded, and do not carry antennas, ladders, rods, or any other long material in the vicinity of overhead wires.

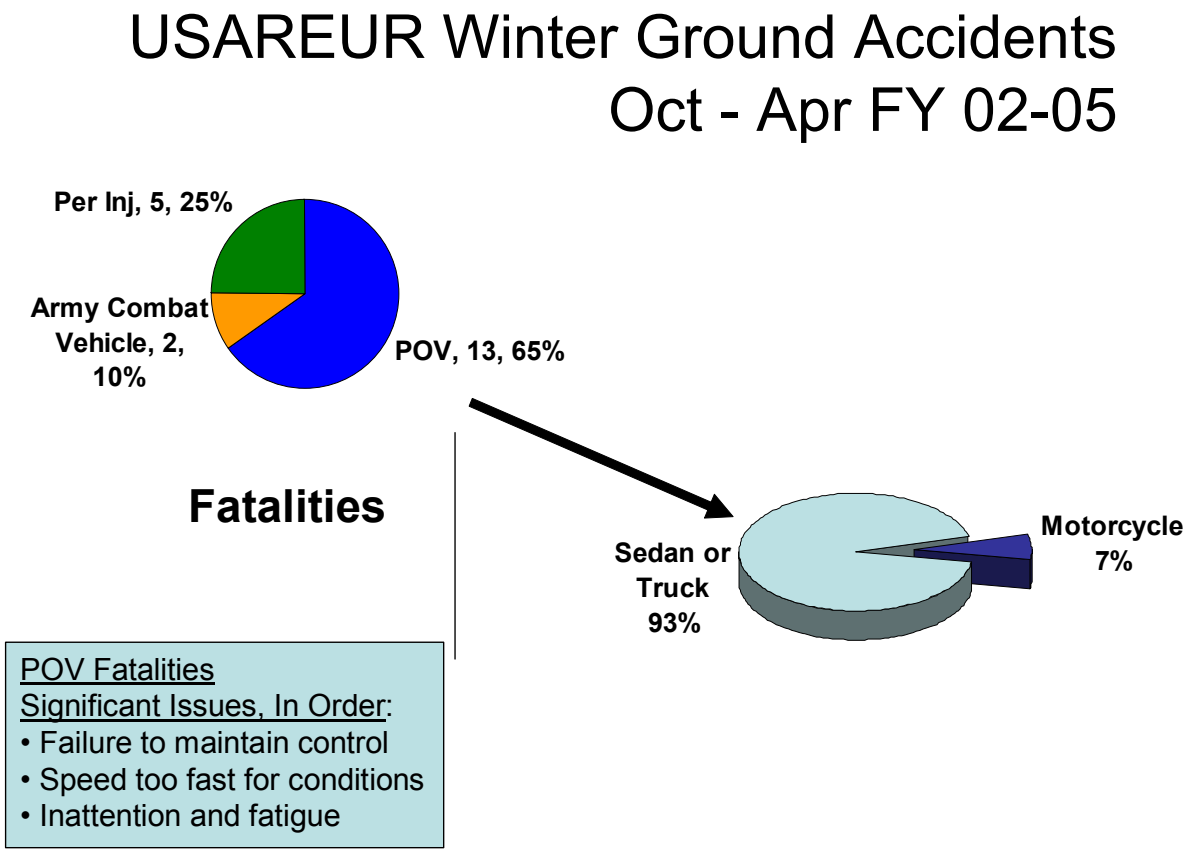
c. Weapons and Explosives. Know the standard for handling simulators, pyrotechnics, and military "fireworks," and execute to standard. Perform "stuck round" and ammunition-malfunction procedures to standard. Check operating procedures for inappropriate shortcuts or local tool procedures outside technical manual requirements. Mark and report but do not touch unexploded ordnance. Store ammunition and explosives in licensed facilities. Always apply the cardinal rule: minimum number of personnel exposed to the minimum amount of explosives for the minimum amount of time. Field storage is addressed in enclosure 3, tab K.

d. Negligent Discharges. Muzzle awareness is addressed in enclosure 3, tabs E and F.

4. Help. The AE Pamphlet 385-15 series provides information on Army and Army in Europe requirements. As instructed in the Commander's Safety Course, the United States Army Combat Readiness Center Risk Management Information System at *https://crc.army.mil/home/* (click on *TOOLS*, then *Link: ASMIS1*) provides information on mission risks. The USAREUR Safety website at *http://www.per.hqusareur.army.mil/services/safetydivision/main.htm* (click on *Safety Campaigns*) and major subordinate command safety websites are also good sources of information.

PRIVATELY OWNED VEHICLE AND MOTORCYCLE ASSESSMENT

1. General. In the first 9 months of FY 05, 105 Soldiers died Army-wide in vehicle accidents. Sixty-nine of those Soldiers died during the Winter Campaign months. As of mid-July, USAREUR had lost four Soldiers in FY 05, which is slightly less than the norm. Overall, the USAREUR trend has been downward. Junior Soldiers between the ages 18 to 23 remain predominantly at risk. However, the wave of motorcycle fatalities has crept upward to staff sergeant, and there is a moderate spike at age 33. This necessitates that senior leaders ensure junior leaders are receiving the same degree of two-way personal risk communication currently directed toward our Soldiers.



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a. The most common reasons for POV and motorcycle crashes are as follows:

- **Speed:** Driving too fast for road conditions or losing control of the vehicle while passing or exiting the roadway. During the FY 05 winter period, all crashes involved failure to maintain control (for example, failure to negotiate corners, overcorrecting).

- **Inattention and Fatigue:** Drifting into other lanes and drifting off the road. Drowsiness and road conditions may have played a part in two FY 05 winter crashes.

b. The *Driving to Arrive* road-user comment website (*http://www.per.hqusareur.army.mil/services/safetydivision/driving_to_arrive.htm*) supports accident-investigation findings. As of mid-July 2005, more than 300 comments were recorded on the website. Over 60 percent of the comments indicated that accidents can be attributed to poor judgment and aggressive driving. By far, the biggest observation is speeding, followed (in order) by disobeying traffic signals, tailgating, and risky passing. These observations include a representative sample of nontactical vehicles, tactical vehicles, and POVs. They clearly show a need for driver attitude adjustment and the 3 Es: enforcement, enforcement, and education about enforcement. Leaders should look for warning signs of the next accident and take decisive action to avoid it.

2. Concerns.

a. Several concerns involving POV operation must be addressed. One concern is the orientation of individuals returning from extended deployment. These individuals must receive refresher training on local traffic laws and hazards as part of their reintegration and reconstitution processes. Personnel rotating in must also be acclimated. An additional concern is the ever-present danger of operating motor vehicles while under the influence of drugs, prescription medication, or alcohol, and driving while fatigued.

b. Soldiers returning from extended deployment will not be authorized to operate a POV until their license and registration are validated, their vehicle is inspected (if it has been in long-term storage), and they have received a reorientation on driving laws and conditions in the local area.

c. Motorcycle riding skills are perishable. In accordance with previous safety campaigns and AE Regulation 190-1, all Soldiers should have a current Motorcycle Safety Foundation certificate.

d. As with previous safety campaigns, each base support battalion (BSB) will collect information concerning dangerous roads and intersections in their geographic area. This information will be posted on the USAREUR Safety website and be available directly from BSB safety offices.

e. Soldiers and family members face risks every time they plan and take long trips. Fewer hours of daylight and winter road and traffic conditions pose additional risks. The central region is on the same latitude as central Canada. Personnel used to the daylight hours and weather conditions of the mid- and southern U.S. will need to understand and adjust to the differences.

f. *Under the Oak Tree* counseling remains mandatory for Soldiers who plan to take trips. ASMIS-1 POV results will be used to guide this counseling.

g. Commanders should find innovative ways to prepare spouses and family members of deployed Soldiers. Leaders must get involved to help Soldiers and rear-detachment family members with their extended POV travel plans.

3. Hazards of Winter Driving in Europe.

a. General. Winter driving in Europe can be hazardous. Road conditions can change very quickly, which can be deadly for unsuspecting drivers. Heavy rain, fog, snow and ice, heavy ski-season traffic, and sudden stops are conditions that are frequently responsible for Soldier, civilian, and family-member deaths and injuries. All drivers need to be alert and prepared for possible emergencies to avoid injury to themselves and others. Many times, adjusting to longer separation distances, reducing speed, and driving defensively will significantly reduce the risks and prevent accidents.

b. Driving Conditions. People can expect the following driving conditions when driving in Europe. Recommended precautions are given for each of these conditions to reduce the potential for accidents. All Soldiers and civilian employees should be briefed on these hazardous driving conditions and precautions before 15 November.

(1) Fewer Hours of Daylight. In the central region, unit personnel begin a normal duty day in darkness and go home in darkness. For this reason, POV lights must be clean and in good condition. Most personnel can obtain a free inspection through the annual Vehicle Lighting Campaign, including headlight aim. Windshield cleanliness, wiper serviceability, and a functional defroster are also very important for maximum visibility. When it is dark, the field of view is limited to the range of the vehicle headlights. Drivers should avoid driving faster than they can react to obstacles that may emerge at the boundary of the vehicle headlights.

(2) Fog. Fog is the condensation of moisture in the atmosphere near the surface of the earth. This condition occurs throughout the year. Fog can form quickly and may reduce visibility to zero. Fog is a major hazard on European highways and contributes to many multivehicle accidents each year. Use the following safety tips when fog is expected:

- Consider postponing your trip until the fog clears.
- Slow down before you enter a patch of fog.
- If your vehicle is equipped with fog lamps, turn them on.
- Be sure that you can stop within the distance that you can see.
- Turn on the wipers and defroster to remove moisture from the windshield.
- Use your low-beam headlamps, whether it is day or night.
- Do not use high beams; they reflect off the fog and can reduce visibility.
- Use the right edge of the road or painted road markings as a reference.
- Watch out for slow-moving, parked, or stopped vehicles.
- Do not change lanes or pass other vehicles unless absolutely necessary.
- If you must pull off the road, signal, and then carefully pull off as far as possible.
- After pulling off the road, turn on your hazard flashers and place your warning triangle between your car and oncoming traffic.

(3) Rain. Long periods of rain can lead to flooding and standing water on the roads. Even thin layers of water on the road can create dangerous conditions. Heavy rains can reduce a driver's visibility to dangerously short distances and make roadway markings and other traffic difficult to see. Water mixed with roadway dirt and oil can create slick surfaces. Wet brakes can increase stopping distances. Hydroplaning can occur when the tire's tread cannot remove the water from underneath the tire fast enough. The tire begins to ride on top of a ridge of water and loses contact with the ground, which can cause the driver to lose control of the vehicle. The combination of fast speeds and wet European highways results in many hydroplaning accidents each year. Many variables lead to hydroplaning, but slower speeds and good tires are the best ways to prevent it. The following safety tips should be used when driving in wet weather:

- Most important, slow down.
- Follow vehicles using the 3- (or more) second rule of spacing (AE Pam 190-34).
- Try to follow in the tracks of the vehicle in front of you.
- Avoid hard braking; take your foot off the accelerator to slow down.
- Ensure tires and windshield wipers are in good condition.
- Always drive with your headlights on in wet weather, where permitted by law.
- Never drive beyond the limits of visibility.
- Never drive through moving water or puddles that touch the vehicle frame.
- Beware of high winds during storms.

(4) Ice. Icy conditions can be expected any time the outside air temperature is 40 degrees Fahrenheit (4 degrees Celsius) or less. Although water freezes at 32 degrees Fahrenheit (0 degrees Celsius), road surfaces can freeze when the air temperature drops to 40 degrees Fahrenheit (4 degrees Celsius). An important place to watch for this condition is on bridges. Bridge surfaces are exposed to the wind and cool off faster than the rest of the road. Freezing rain can glaze road surfaces with ice, causing extremely hazardous driving conditions.

(a) The following terms are often used to describe specific icing conditions that drivers can expect. Some are more easily recognizable than others, but all are dangerous.

- **Black Ice.** Black ice occurs when condensation, such as dew and fog, freezes on road surfaces when temperatures reach 32 degrees Fahrenheit (0 degrees Celsius) or below. This forms an extra-thin layer of ice on the road that is difficult to see. This ice surface is one of the most slippery road conditions. Black ice is likely to form first under bridges and overpasses, in shady spots, and at intersections.

- **Glare Ice.** Glare ice is a slippery spot that may appear on an otherwise clear road. It is most common in shaded areas where a cold wind can freeze a wet road surface quickly. If you see a patch of ice ahead, brake before reaching it and try not to brake while actually on the ice.

- **White Ice.** White ice results when compacted snow melts slightly and then freezes. This ice can usually be seen on the road. When traveling on white ice, drive very slowly. If you cannot find a place to park until conditions improve, install tire chains for better traction.

(b) When roads are icy or slushy—

- Drive slowly and allow extra room to slow down and stop. It can take 10 times longer to stop in icy conditions than on a dry road.
- Use the highest gear possible to keep the wheels from spinning.
- Maneuver gently and avoid harsh braking and acceleration.
- To brake without locking the wheels, get into a low gear earlier than normal, allow the speed to fall, and use the brake pedal gently.
- If you skid, ease off the accelerator, but do not brake suddenly. Turn the front wheels toward the direction in which the rear wheels are skidding.

(5) Snow. Drivers can expect snow while driving in Europe. Although snow is more common in elevations higher than 300 meters, it will probably snow everywhere at some point in the season.

(a) Falling snow can reduce driver visibility, especially when it is windy, and drastically after dark. Snow can accumulate very quickly, especially at higher elevations, and cause slippery driving conditions. Roadways on hills are frequently blocked by heavy vehicles unable to maneuver until road crews can wind their way through the traffic to plow and spread abrasives (traction-improving materials). Be prepared to use alternate routes and spend time in traffic jams. Drifting snow can become very deep on roads at all elevations. Snowdrifts can be a very serious hazard to drivers, because they can render any vehicle immobile and lead to very large traffic jams. Drivers should be prepared for snow before driving during the winter months.

(b) Proper use of snowchains can make driving in the snow safer. Snowchains can be rented from many gas stations midway through your journey and dropped off at another station down the road. Sometimes membership in one of the European-based automobile clubs is necessary for this service, but not always. The cost is low and is based on the number of kilometers traveled. Stop as soon as you think you may need the snowchains, because supplies are limited at each station. Otherwise, purchase a set of snowchains properly sized for your vehicle and keep them in the vehicle during the winter season. Practice installing them before it begins to snow.

(c) The following safety tips should be used when driving in snowy conditions:

- Slow down. Triple the usual distance between your car and the one ahead.
- Stay in the plowed lane and avoid driving over the ridges between the plowed areas. If you must switch lanes, slow down, signal, and move over slowly.
- If you skid, steer into the skid. For example, if the back of your vehicle is skidding to the left, turn the steering wheel to the left.
- Do not pump your brakes and avoid locking them up. If your brakes lock, take your foot off the brake pedal for a moment.
- If you are involved in a fender-bender, move the vehicles out of the lanes of travel.
- Keep a blanket and flashlight in the vehicle.

- While driving, keep your headlights on. Keep snow and ice off your mirrors, windows, and lights.
- As always, wears your seatbelts.
- If your vehicle has an anti-lock braking system (ABS) and you must brake, be sure to press the brake pedal and hold.

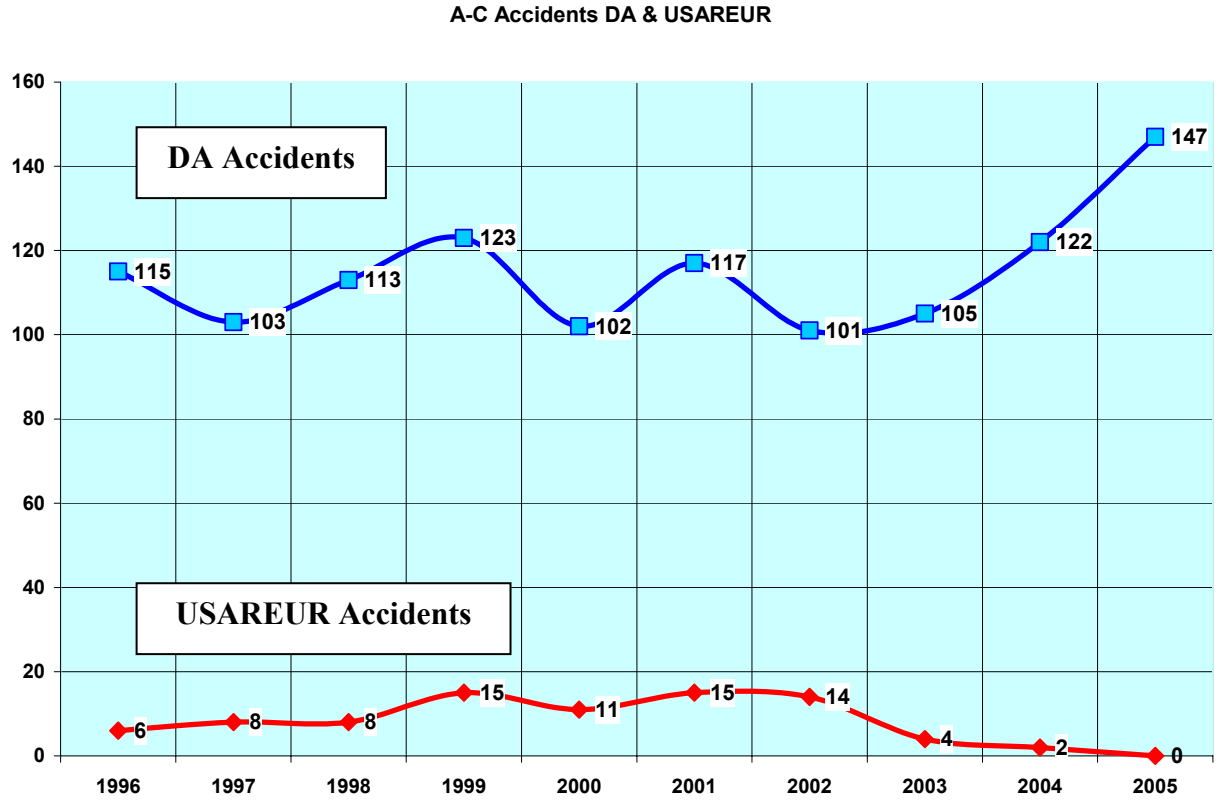
c. Fatigue. Safe driving demands your full attention. Fatigue on the road can be a killer. Know the symptoms and causes of fatigue and what to do to control it. If you feel your eyelids getting heavy, your next actions may determine not only whether or not you will stay awake; they may determine whether or not you stay alive. For example, skiing all day and expecting to return a long distance that night is a very risky plan. Fatigue happens frequently on long drives, especially long night drives. Given the extended hours of darkness, fatigue can set in earlier than anticipated. Traffic can be heavy and weather conditions may not be the best. All these factors increase stress and produce fatigue. Signs of fatigue include back tension, burning eyes, shallow breathing, inattentiveness, and erratic driving, such as drifting, abnormal speed, tailgating, or failure to obey traffic signs. Alcohol consumption also increases fatigue. Alcohol is a depressant and a driver does not have to be drunk to fall asleep at the wheel. Even one drink can be too many. The National Safety Council offers these tips for staying awake while driving:

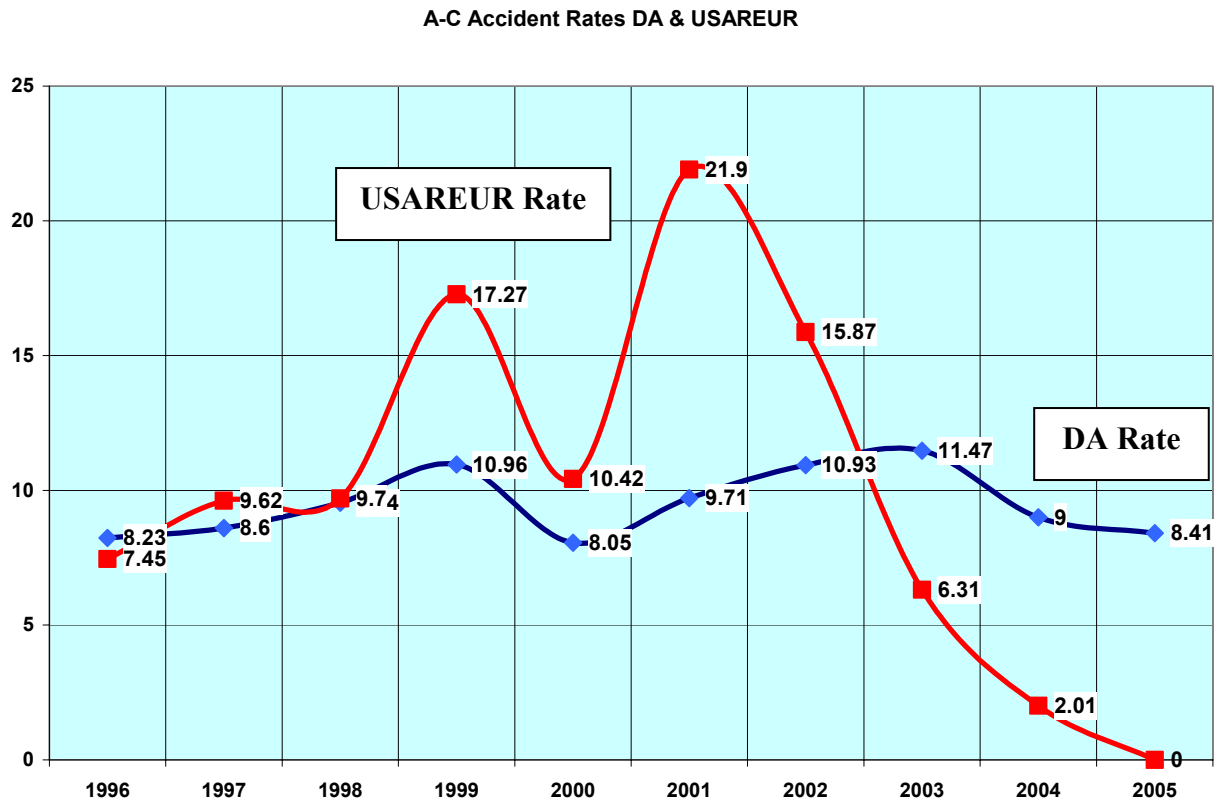
- The obvious cause of fatigue is lack of sleep. If you have not received 7 or 8 hours of sleep the night before a trip, you are likely to experience fatigue. Get enough rest. Do not start a trip late in the day or in the evening. Long-distance driving is hard work and you need to be fresh and alert.
- If possible, do not drive alone. Passengers can take turns driving and help keep you awake.
- Avoid long drives at night. The glare of lights increases the danger of highway hypnosis. Falling snow also causes hypnosis.
- Adjust yourself and your car's environment so that it helps keep you awake and alert. Keep the temperature cool. Open windows as necessary for a crisp breath of air. Turn the radio volume up and switch stations frequently, but avoid soft, sleep-inducing music. Chew gum, stretch your legs, talk to yourself, or sing. Keep your eyes moving. Maintain good posture. Drive with your head up and your shoulders back. Tuck your buttocks against the seat back. Legs should not be fully extended, but flexed at about a 45-degree angle. Take frequent breaks. At least every 2 hours, stop at a gas station, restaurant, or rest stop. Get out of the car, walk around, even jog or do calisthenics. In addition to exercise breaks, stop for light meals and snacks. Avoid alcohol entirely.
- Do not allow your eyes to become fatigued or hypnotized. Squinting caused by glare increases the chances of falling asleep. Wear sunglasses during the day when necessary.
- If anti-fatigue measures fail and you start noticing the danger signs of fatigue, there is only one solution: sleep. Good planning can avoid your having to deal with fatigue and can help ensure a safe trip.

AVIATION ASSESSMENT

1. Purpose. This tab provides Aviation risk-management guidance to leaders for operations in the central region and the Balkans, and those deploying or redeploying from contingency or combat operations. It builds on the USAREUR 2005 Summer Safety Campaign analysis.

2. USAREUR and DA Aviation Accident History. USAREUR can be justifiably proud of the significant reductions it has made to its accident rate in the central region. Since the start of this fiscal year, USAREUR has experienced only 10 class E mishaps without injury or fatality. I attribute this to aggressive implementation of aviation safety guidance issued by the Vice Chief of Staff of the Army (VCSA), commander and senior leader involvement, and adherence to the standards of accident avoidance outlined in the Summer Safety campaign. This is not the time to get comfortable. The difference between a class E mishap and the loss of a Soldier or an aircraft is sometimes only a matter of inches or a couple of seconds. We must continue to identify, evaluate, and implement risk-reduction techniques learned from all aviation accidents.





3. Accident Categories. Listed below are the leading accident categories and a summary of accidents that fall in each category.

a. Primary Accident Types and Hazards.

(1) Unintentional Impact with an Object or Surface. Throughout our 10-year accident history, this is our number-one accident type and it is the most common accident. Examples of this type of accident include ground strikes, tree strikes, mid-airs, and wire strikes.

- While conducting a multiaircraft, nighttime zone reconnaissance at terrain flight altitude using night vision goggles (NVG), chalk 2's main rotor blade struck chalk 1's vertical fin, tail-rotor gearbox, and tail boom. Both aircraft crashed. Chalk 1 crewmembers received serious injuries. Chalk 2 was destroyed in the post-crash fire and both crewmembers were fatally injured.

- On post-flight inspection, after false insertion of infantry troops into a landing zone, damage to the tail boom and stabilizer was noticed. It is suspected that the aircraft struck a protruding object in the grass.

- The aircraft taxiing into a parking area went too far forward, allowing the main rotor to strike a 2-by-4 sticking up out of a drum. Damage was caused to thee main rotor blades about 4 inches inboard of the tip caps.

- A Raven unmanned aerial vehicle (UAV) collided with an OH-58 aircraft during flight.

- During an attempt to fly over an observation post on the perimeter of the camp, the rotor blades touched the top of a high mobility multipurpose wheeled vehicle (HMMWV).

- The UH-60L aircraft was conducting a cross-country, visual flight rules (VFR) mission with three crewmembers and four passengers on board. The crew was attempting to re-file to an instrument flight rules (IFR) flight plan when the aircraft struck tower guidewires supporting a 1,700-foot tall television transmission tower while traveling at about 80 knots. The aircraft broke up in flight and crashed upside down in an open field. The aircraft was destroyed by a post-crash fire. The crew and passengers were fatally injured.

- While turning during a 15-foot above ground level (AGL) hover, the crew of a UH-60 felt a vibration coming from the tail of the aircraft. The crew flew the aircraft approximately 60 meters away, then turned to see they had struck a tree. The aircraft landed and was shut down without further damage. An inspection revealed damage to all tail-rotor blades and the stabilator.

- While conducting a night formation flight approach to the forward arming and refueling point (FARP) using the night-vision systems, the lead aircraft (UH-60A) in a flight of two decelerated and made a descending left-pedal turn to the taxiway leading to the FARP. As the UH-60A's tail wheel touched down and the main landing gear was about 1 foot off the ground, the trail aircraft's (AH-64A) tail section struck the UH-60A's main rotor system. Both aircraft were destroyed in the post-crash fire. The crew and passengers in the UH-60A received minor injuries. Both pilots in the AH-64A aircraft received fatal injuries.

- During a combat reconnaissance mission, the aircraft touched the ground left skid first, flipped about two or three times, then slid 159 feet before coming to a stop on its left side.

- While conducting a daytime, single-ship, gunnery training mission, the pilot in command, who was occupying the back seat and at the controls, initiated a right break after completing an attack run. The aircraft crashed into the ground in a 31-degree, right-bank angle, with a 21-degree, nose-down attitude, at 134 knots airspeed. The aircraft was destroyed. The pilot in command was fatally injured and the pilot suffered serious injuries.

- While conducting night reconnaissance using NVG, chalk 1 in a flight of two OH-58s struck the second of two wires at approximately 115 to 120 feet AGL midway between the two stanchions. At least two of the main rotor blades struck the wires. The second rotor blade was severed about halfway from the blade tip to the hub after hitting the wire. As a result, the aircraft spun to the right about 360 degrees and fell diagonally about 150 feet before crashing into the 3-foot earthen bank that ran parallel to the two-lane hard-surface road. The aircraft hit the bank nose first and flipped tail over nose, coming to a rest on its right side on the road. The aircraft was destroyed and the crew received fatal injuries.

- A medical evacuation (MEDEVAC) aircraft was attempting to park between two other aircraft in a confined area when the aircraft main rotor blades meshed with the main rotor blades of a parked aircraft, damaging the main rotor blade tip caps of both aircraft.

- During a daytime, multiaircraft, close-combat attack training mission, the pilot, who was in the front seat and at the controls, initiated a transfer of the flight controls while turning inbound for the attack run. The pilot in command did not acknowledge the transfer or assume control of the aircraft. Eleven seconds later, the aircraft crashed into a hillside. The aircraft was destroyed and both crewmembers received fatal injuries.

- The aircraft touched a radio tower and wires during low-level flight and subsequently crashed into a nearby field.

- The aircraft crashed into trees, damaging the main rotor system, tail boom, and tail rotor. Two people received minor injuries.

- The aircraft touched wires while in flight. The wire-strike protection system functioned, but the wire struck and damaged the windshield and frame. The pilot suffered a small laceration and was treated and released.

- The crew was conducting nap-of-the-earth training on an approved route when the aircraft apparently struck several strands of wire. The aircraft landed in a river and both crewmembers received fatal injuries.

- While taxiing into a designated parking area, the aircraft's main rotor system touched the main rotor blade of a parked aircraft. The accident aircraft sustained damage to three main rotor blades.

- Aircraft main rotor tip caps touched the top of a concrete barrier while parking.

(2) Environmental. This type of accident occurs when the aircrew loses visual reference with the ground during takeoff, landing, or while en route. This is the second most-common type of accident.

- While conducting multiaircraft NVG operations at 500 feet AGL, the lead aircraft in a flight of two UH-60L aircraft encountered instrument meteorological conditions (IMC). While inadvertent IMC procedures were being executed, the aircraft descended rapidly and struck the ground. The aircraft was destroyed and five of the seven personnel on board were injured.

- The crew made a hard landing under snow conditions after confined area training.

- During a snow landing in an unimproved landing area while conducting training, the aircraft's right-aft landing gear struck a boulder that was covered in snow and fell off.

- During an approach to a landing, the crew experienced white-out conditions and drifted into trees, damaging main rotor blades, tail-rotor blades, the stabilator, and upper engine deck.

- The aircraft crashed when it reportedly encountered sand or dust conditions.

(3) Maintenance. This type of accident usually involves failed aircraft components, unsecured cowlings, or objects lost in flight, as well as accidents on the ground involving the handling or movement of aircraft.

- The aircraft was ground-taxiing when it suffered failure of right rear landing gear strut during a right turn.

- The crew reported an NP (power turbine) overspeed of the #1 engine (130 percent for 4 seconds, peaking at 136 percent) during flight.

- The #5 tail-rotor drive shaft cover separated in flight, damaging the tail-rotor blade and main rotor blade, and causing sheet-metal damage.

- While in a 30-foot hover, the aircraft began to yaw and spin around the vertical axis, then crashed into the ground in an upright position.

- The aircraft experienced tail-rotor gearbox damage when the aircraft was started with low gearbox-oil pressure.

- The aircraft experienced a single engine failure and the crew had to make a hard landing, during which the aircraft incurred extensive damage.

- The crew experienced a split torque (Nr) reading while hovering.

- The crew received a low fuel pressure indication followed by dual engine flameout. The crew entered autorotation, and the aircraft landed hard and rolled on its side.

- The aircraft sustained failure of the tail-wheel strut and subsequent loss of the tail wheel during a landing iteration to a sod area.

- The crew experienced a series of engine torque splits while in flight.

- The aircraft experienced a #2 engine failure while in flight.

b. Accident Causes. Human error has been sited in over 85 percent of USAREUR's 10-year accident history. These accidents can be attributed to one or more of the following three failures.

(1) Individual Failure (Human Error). Individual failures include omitting, overseeing, or arbitrarily disregarding an established standard or procedure (for example, failing to adhere to a minimum hard-deck altitude, skipping steps or items in an aircraft checklist). In addition, failure to properly use aircrew-coordination techniques has been a factor in an increasing number of accidents.

(2) Leader Failure (Human Error). Leader failure includes failing to enforce standards, failing to provide proper supervision, and making uninformed risk decisions (for example, poor crew selection, inadequate mission planning, not correcting behavior inconsistent with the standard).

(3) Training Failure (Human Error). Training failure includes failing to train properly for a mission (for example, executing a "fast-rope" mission without all crewmembers being "current" in the procedures), lack of proficiency in the required tasks, and allowing the urgency of a mission to push crews beyond their capabilities.

c. Aviation Operational Hazards. In addition to the operational hazards identified in the previous campaign, the following areas have been identified as needing special emphasis in our risk-mitigation and aircrew-training programs.

(1) Aircrew Coordination Failures. As our aircraft become increasingly complex and our aircrews perform more demanding missions, a high level of coordination is required by these aircrews to accomplish these missions successfully. Aircrew coordination failure has been a factor in 66 percent of Army aviation accidents. In this past year, the following examples highlight the necessity to increase the emphasis on and ensure proficiency of our aircrews in this critical task.

- While conducting a daytime, single-ship, gunnery training mission, the pilot in command, who was occupying the back seat and at the controls, initiated a right break after completing an attack run. Both crewmembers became focused inside the aircraft at the initiation of the right break. The aircraft crashed into the ground in a 31-degree, right-bank angle, with a 21-degree, nose-down attitude, at 134 knots airspeed. The aircraft was destroyed. The pilot in command was fatally injured and the pilot suffered serious injuries.

- The aircraft had risen into a 3-foot AGL hover and encountered #2 engine compressor-stall indication. The post-flight inspection revealed that both engine inlet covers were still in place.

- During a daytime, multiaircraft, close-combat attack training mission, the pilot, who was occupying the front seat and at the controls, initiated a transfer of the flight controls while turning inbound for the attack run. The pilot in command did not acknowledge the transfer or assume control of the aircraft. Eleven seconds later, the aircraft crashed into a hillside. The aircraft was destroyed and both crewmembers suffered fatal injuries.

- After refueling operations, the pilot in command attempted to advance the power levers to fly and the #2 power lever jammed approximately three-quarters of the way to fly. The pilot in command then asked the co-pilot gunner if anything in the flight system was preventing the power lever from going to fly. The co-pilot gunner said no. The pilot in command then forgot to check the power lever before attempting to back the aircraft out of refuel and over-torqued the aircraft.

- The auxiliary power unit was not at 100 percent before complete reduction of engine power. The pilot in command moved the power levers back to the fly position, resulting in NP and NR (main rotor) overspeed.

- After overcoming numerous problems during run-up, the aircrew had completed a HIT check before formation join up. While repositioning the aircraft for a formation flight, the crew noticed that the #1 power lever was not in the fly position. The aircraft experienced an over-torque reading of 136 percent.

(2) Inadvertent IMC (IMC). We must train our aircrews to properly react to reduced-visibility situations. Improper weather decisions, incorrect application of initial immediate-action steps, and overconfidence are increasingly identified as accident causes when an aircraft encounters less than VFR conditions.

(3) USAREUR Airfields and Helipads. As USAREUR restructures, it is imperative that we maintain supervisory and safety oversight of our airfields and helipads. In most cases, a unit aviation safety officer has been designated to serve as the airfield safety officer. However, as units deactivate, deploy, or realign, this safety and administrative oversight can be lost. Someone must be designated to provide this critical function.

(4) Unmanned Aerial Vehicles. The integration of UAVs into our units brings unique challenges that have not been encountered before. The USAREUR aviation family needs to wrap its arms around them, integrate them into the aviation fold, and assist them with innovative solutions to overcome these challenges. These aircraft and crews share our airspace and airfields, and greatly increase the warfighting capabilities of our units.

d. Risk Mitigation.

(1) Human Error (Leadership and Individual Failure). The most effective tools for eliminating failures of leaders and individual Soldiers are as follows:

(a) Command Emphasis and Support. Aviation leaders from the top down must advocate and enforce standards. We must empower our subordinate supervisors to act on our behalf and with the full weight of our convictions.

(b) Ownership (Accountability and Direct Oversight). Aviation leaders must assume ownership of and personal responsibility for the safety of their personnel. These leaders must provide direct supervision during daily operations and make spot-checks during the preparation, training, and execution phases of missions. "Soldiers do what leaders check."

(c) Identify Risk-Takers—Intervention. Leaders must not accept behavior that is inconsistent with standards. Allowing substandard performance can lead to accidents. There are risk-takers and those who take shortcuts. Identify these individuals and other personnel who omit or compromise a standard, and intervene. Make corrections and make these personnel aware of your expectation of their performance. Make them accountable and reeducate and retrain them to standard. Leaders, peers, and subordinates must show "tough love" to their fellow Soldiers. We must develop a willingness to tactfully yet deliberately correct inappropriate behavior before an accident occurs. We cannot afford to look back and say, "I knew that would happen."

(2) UAV Operations. An immediate hazard of UAV operations is the necessity for the launch and recovery crew to operate on the movement areas of airfields. These operations must address the same requirements as vehicle operations on movement areas. Airfield standing operating procedures should address marking, light-gun signals, knowledge testing, and procedures to deconflict manned aircraft movements from UAV operations.

(3) Predeployment Preparation. Predeployment training is key to reducing accidents. Think "outside the box" when formulating your training plans. Integrate training in your simulators, aircraft, and classrooms. As a minimum, the following topics should be addressed:

(a) Aircrew-coordination training.

(b) Brownout training.

(c) Inadvertent IMC training.

(d) Power management.

(e) Unit no-notice program.

(4) VCSA (General Cody) Aviation Safety Guidance. Implementation of the VCSA's message into our daily operations has had a significant effect on reducing accidents. The areas listed below continue to require emphasis. Sustain the momentum and look for ways to improve implementation. Periodically review the procedures you have in place in the following areas and adjust them as necessary to ensure that these programs remain effective.

(a) Air mission briefings.

(b) Evaluating leading indicators.

(c) Noncommissioned officer participation in risk mitigation.

(d) Non-rated crewmember training and evaluation programs.

(e) PC training and evaluation programs.

(f) Pilot briefings.

e. Aviation Commanders. Aviation commanders will continue to—

(1) Sustain the current unit safety posture and reduce hazards by continuously applying composite risk-management principles as necessary during preparation, movement, reintegration, and sustainment operations.

(2) Ensure that clear, concise, and functional guidance is in place for expected mission requirements and direct leaders at every level to supervise and enforce standards.

(3) Ensure that deliberate risk assessments are performed for all applicable mission and task scenarios particular to the various phases of operation (for example, preparation, movement, reintegration). Hazards identified during the risk assessment and the review of relevant safety publications will be documented and mitigated according to the five-step risk-management process.

f. Aviation Units. Aviation units will continue to—

(1) Establish and emphasize their emergency helicopter instrument recovery procedure (EHIRP) for their current area of operation.

(2) Conduct operational and safety surveys to identify hazards to flight specific to their area of operation.

(3) Establish and rehearse their unit pre-accident plan.

(4) Implement and enforce crew-endurance and fighter-management programs.

WINTER TRAINING HAZARDS AND RISK MITIGATION

1. Purpose. This section summarizes winter-specific training issues, which also apply to winter tactical and garrison operations.

2. Environment. The winter weather season is primarily from October through March. Snowfall can be prevalent in the hilly areas of the central region, but can occur anywhere. Cold rain is probable across the region, along with temperatures of 40 degrees F and lower, especially at night. Wet conditions with freezing and thawing should be expected. Expect to encounter ice on roadways, including frequent frost and black-ice conditions. In flight, expect routine temperatures below freezing and the possibility for freezing precipitation and ice accumulation. Where powder snow accumulates, be prepared for blowing and drifting snow across roadways and white-out hovering and landing conditions. Similar conditions may occur in the mountainous regions of Afghanistan and Iraq. Low nighttime temperatures should also be expected with desert radiational cooling.

3. Cold-Weather Injury Prevention. Cold-weather injury causes and prevention are discussed in enclosure 3, tab H. Once "normal" operational hazards are identified, the hazards added by cold-weather operations must be identified and assessed. Leaders must not rely solely on mission or job risk assessments developed during the warmer months. The clothing worn is bulkier, the range of movement is decreased, gloves reduce dexterity and feel, and Soldiers get tired faster and need warming time. Socks must be changed and layers must be adjusted according to the exertion level. Soldiers and leaders must look out for one another. Hydration may not be a conscious thought, but it is a serious health consideration in maintaining bloodflow and body warmth. In addition to the excellent resources referenced in enclosure 3, tab H, the USAREUR Safety website at *http://www.per.hqusareur.army.mil/services/safetydivision/usareur_winter_safety_campaign.htm* has a Fort Drum presentation that discusses winter operations from the individual perspective.

4. Who is at Risk? All individuals operating in cold or cold and wet conditions are subject to cold-weather injuries. However, a medical review of recent winter injuries shows that the following two categories of individuals are at highest risk:

- Males in the grade of specialist and below and approximately 20 years old who come from a warm climate; have less than 18 months in service; use tobacco, alcohol, or medications; and neglect good footcare.

- Anyone who has had a previous cold-weather injury. (These people are susceptible to recurrence.)

5. Common Issues.

a. Slippery Surfaces. Expect all surfaces to be slippery under winter conditions, everything from parking lots and steps to vehicle surfaces and access ladders. Wherever possible, clear ice and snow from walking and work surfaces. Where conditions permit, apply sand, salt, or other abrasives to aid traction. Move slower and cautiously, with a lowered center of gravity. On a vehicle or other structure, maintain three points of contact. Also, cold boots may be more slippery when entering a warm location, especially where the floor is wet.

b. Carbon Monoxide. The hazards of carbon monoxide are discussed in enclosure 3, tab I. Any enclosed space heated by a combustion source, including buildings, shelters, containers, tents, guard shacks, aircraft, and vehicles, is susceptible to elevated levels of carbon monoxide. This is a risk that must be continuously evaluated.

c. Driving. The hazards of winter driving are discussed in enclosure 2, tab B, and apply equally to tactical and nontactical vehicles. Environmental conditions, including reduced daylight hours, play heavily in the degree of risk. Also consider wind chill for any personnel riding in open vehicles, including gunners, passengers (where authorized in training areas), and exposed drivers and tank commanders of armored vehicles. Remove frost, ice, and snow from all lights, windows, and mirrors. Remove snow and ice from vehicle and trailer tops to eliminate white-out and falling-object hazards to following vehicles.

d. Mechanical Systems. Mechanical and hydraulic controls become sluggish in cold weather. Steering systems, transmissions, and gearboxes are lubricated by either oil or grease. Both of these lubricants can be affected by temperature, and in cold weather they tend to thicken. Thicker fluid means slower response and more force is required. These characteristics can increase operator errors or prevent an expected precise maneuver. Seal leaks may also become more prevalent, leading to fire, slipping hazards, and system damage. Hydraulic cylinders and actuators may leak fluid because O-rings, seals, and gaskets are less pliable and become deformed at lower temperatures. Simple actions such as wiping down exposed hydraulic pistons, slowly exercising systems, and thoroughly preheating the system may help alleviate challenges associated with extreme cold weather.

e. Tires. Air pressure drops with the temperature, making tire-pressure checks more important. Low tire pressure can result in premature tire failure or reduced control when turning and braking.

f. Fuel Operations. As the air temperature becomes colder, the drier the air will be. The drier the air, the more static electricity becomes a hazard. Static buildup can result from the vehicle or aircraft moving through the air, friction in clothing, or just brushing off snow. Flowing fuel also generates static electricity. A buildup of static electricity will create a spark as two objects come close to each other, like a finger and a doorknob or a fuel nozzle and a fuel tank. For vehicle refueling, put the nozzle all the way in, making good contact between the nozzle and the tank or filler neck before starting the flow. Fuel-transport vehicles and aircraft must be

grounded and bonded before starting fueling or defueling operations. The same applies to filling fuel vehicle product tanks. Also, protective equipment is a must. Fuel spilled on skin in extremely cold conditions may cause instant frostbite.

6. Aviation Specific Issues.

a. Fuel. When taking fuel samples, drain enough fuel to get rid of all the water. When refueling an aircraft in subzero temperatures, always check the fuel level while outside the hangar. When a full aircraft is moved inside the hangar, the fuel level rises with the higher temperature. Opening the filler cap inside the hangar could result in a fuel spill.

b. Tires. Tires frozen to the ground can lead to unintended aircraft dynamics. Tires can be freed with an approved liquid deicer. Move the aircraft immediately to keep tires from freezing again as the slush formed by the deicer refreezes.

c. Rotor Wash Wind-chill precautions also apply to individuals exposed to rotor wash, including crew chiefs, fueling personnel, passengers, and bystanders.

d. Ground Handling. Ground handling aircraft on snow and ice has the same hazards as operating a vehicle under the same conditions. In addition, sliding aircraft can injure ground handlers and result in rotor blade or tail damage. Reduced tug traction may result in a sliding aircraft towing the tug.

e. White-Out. Landing in loose and powdery snow creates the same conditions as dust.

f. Hidden Objects. Aircraft belly damage occurs occasionally when operating in remote sites. Snow will settle around objects, preventing them from being seen. The result is loss of landing lights and antennas, and underside skin punctures.

g. Ice. Lower winter temperatures bring the icing level lower to the ground. Anti-ice systems must be fully operational. Freezing drizzle or freezing rain challenges deicing systems. Stay abreast of in-flight, alternate airfield and destination weather, and make “No Go” decisions when necessary. On the ground, remove accumulations of snow and ice. Ice shedding can be a hazard to surroundings during run-up and following flight in icing conditions.

h. Inadvertent Instrument Meteorological Conditions (IMC). Low clouds and fog, freezing participation, cold fronts, squalls, and landing in white-out conditions present challenges that require a transition to instruments. As identified in the aviation risk assessment, pilots must be current and proficient in recovery tasks.

PROGRAM MATRIX

1. This enclosure provides tailored requirements to be applied during the campaign by units categorized as follows:

a. Balkans-based units.

b. Garrison-based units, including rear detachments, except for units based in the Balkans.

c. Redeploying, reintegrating, reconstituting, and retraining (R4) units.

d. Units identified to deploy to Operation Iraqi Freedom, Operation Enduring Freedom, or another tasked mission or exercise.

2. My intent is to distribute tasks in accordance with the following table, with respect to tabs A through K of this enclosure.

Task	Balkans	Garrison	R4	Deploying
Enclosure 2, tab C: Mission risk assessments, mission briefings, and transitioning to instrument meteorological conditions	Note 1	Note 1	Note 1	Note 1
Enclosure 2, tab D: Winter Training Hazards and Risk Mitigation	X	X	X	X
Tab A: Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) Risks	X			X
Tab B: Sleep Management and Soldier Readiness: A Guide for Leaders and Soldiers	X	X	X	X
Tab C: Ionizing Radiation Safety Program	X	X	X	X
Tab D: Product Quality Deficiency Reporting and Equipment Safety	X	X	X	X
Tab E: Do You Really Know if That Weapon is Loaded?	X	X	X	X
Tab F: Weapon-Muzzle Discipline	X	X	X	X
Tab G: Civilian Job-Hazard Analysis and Health Evaluations	X	X	Note 2	
Tab H: Cold-Weather Injury Prevention	X	X	X	X
Tab I: Heaters and Carbon Monoxide Prevention	X	X	X	X
Tab J: Unit Safety Certification		X	X	
Tab K: Previous Campaign Initiative Summary	Note 3	X	X	Note 4

NOTES:
1. Aviation commanders will accomplish this task in addition to the main applicable category.
2. This tab is applicable to R4 units once the R4 process is complete.
3. This tab is applicable to Balkans rotational units where the function is applicable to their environment. (For example, Motorcycle Safety Foundation training is not applicable.)
4. This tab is applicable to deploying units where the function is applicable to deployment preparation and operations (for example, railhead training).

OPERATION IRAQI FREEDOM (OIF) AND
OPERATION ENDURING FREEDOM (OEF) RISKS

1. The United States Army Combat Readiness Center has issued a series of DVD and CD video products that concentrate on risk identification and management. These include the following:

- Letters from War: Explosives Safety (PIN 7117716) (FOUO). This video includes information on improvised explosive devices (IEDs), explosive ordnance disposal (EOD) operations, and munitions handling, as well as several references.
- Letters from War: Tactical Movement (PIN 711717) (FOUO).
- Letters from War: Medical (PIN 711721) (FOUO). This video includes information on personal protective equipment and heat-injury issues and prevention.

2. The following examples are representative of the risks deployed Soldiers encounter and the types of errors Soldiers make. These examples show that having the right skills and following basic standards in the central region can save lives in a combat theater. Safety and force protection must be considered together under composite risk management. Avoiding accidents and minimizing consequences allow a Soldier to continue the fight. Accident summaries from actual OIF and OEF accidents are shown in the bullets.

a. Vehicles.

(1) Rollover. Rollovers are common for vehicle accidents in theater. Speed, road conditions, tire damage, and sudden evasive actions are the routine causes of rollovers. Several accidents have also occurred when the vehicle weight has collapsed the roadside, and the vehicle landed in water. Soldiers must respect "soft shoulders," especially next to dropoffs. Similar issues are seen with roads in the Balkans. Gunners and tank commanders are at serious risk. Rollover drills are necessary and equipment must be secured in the vehicle to facilitate emergency action. Seatbelts are necessary to minimize the chance of being incapacitated in a crash. Countering post-crash enemy action requires that you survive the crash. Seatbelts enhance survivability.

- The roadway gave out, causing the vehicle to roll over and submerge in a river.
- The driver did not notice the 18-foot dropoff. The ground gave way and the vehicle rolled down into a canal.
- The driver lost control after hitting a road hazard, which resulted in a rollover.
- The Servicemember was backing a forklift on uneven terrain when it became off-balance and turned over, catching his foot and causing injury.

(2) Other Person at Fault. It is dangerous to assume that others on the road will follow the same rules of the road that we do. In general, whatever the rules are, some drivers ignore them and do whatever they wish. Bottom line, embrace defensive driving and accident-avoidance techniques and constantly wargame your surroundings. Plan for the unexpected.

- The driver failed to yield the right of way.
- The Servicemember was struck while changing a tire.
- The vehicle was rear-ended when the driver slowed down.

(3) Army at Fault.

- The driver backed over a Servicemember sleeping behind a trailer.

Sleeping under or near vehicles has always been a deadly risk. Establish sleeping areas away from vehicles.

- The Servicemember rear-ended a convoy vehicle in front when dust obscured the Servicemember's vision.
- The Servicemember was operating an M923 in a road march when the truck in front stopped. The Servicemember rear-ended the truck, then an M977 rear-ended the M923, causing damages.

High speed, tight vehicle groups, fatigue, and reduced visibility due to environmental or imposed conditions combine to create a reasonably high incidence of rear-end collisions. Staggered formations, lower speed, and rest are possible countermeasures. Ease up and open up where threat conditions allow.

- The Servicemember attempted to pick up his M4 carbine, which was caught on the brake lever of a high mobility multipurpose wheeled vehicle (HMMWV); the weapon discharged twice, causing damages.
- The Servicemember was driving a refueler (M978) when some sandbags slid forward, preventing the Servicemember from applying the brakes and causing him to lose control of the vehicle, which overturned.

These incidents illustrate the point about clutter in a vehicle. Personal gear, equipment, and trash often accumulate in vehicles. This is especially true in deployed environments. Anything that can fall, slide, or jump into a position that can interfere with vehicle controls is a significant hazard. Expect abrupt maneuvers and uneven roads to cause things to move around in the vehicle. The countermeasure is to secure material and police up the area.

- The Servicemember was the ground guide for an M1114 when the driver of the M1114 ran over the Servicemember's feet.
- When positioning an M88, the M88 crept forward, pinning the Servicemember (ground guide) between the M88 and an M3, causing injury.

First, use the ground guide. Second, do not forget that the ground guide is your best friend and quite possibly a crewmember. A ground-guide incident is rarely complex. Losing sight of a ground guide, which includes purposefully ignoring his or her presence, can be fatal. Be a team, communicate, and stop the vehicle immediately if you lose sight of your guide. Follow standards for hand signals. Do not allow familiarity to breed carelessness. Maintain situational awareness, even around "small" vehicles.

- The Servicemember was operating an M1037 during combat patrol. While negotiating a "wadi," the M1037 went down a 4-foot drop and overturned. The gunner was fatally injured.
- A Bradley fighting vehicle (BFV) (M2A3) and an Abrams (M1A2) were traveling in opposite directions in foggy conditions. The BFV struck and sheared off some tiles on the side of the explosive reactive armor.

The first incident is a rollover and again shows the importance of rollover drills. It also shows the hazards of operating over open terrain, around dry river beds (wadi), and near fighting positions. Know the vehicle hill-climbing capabilities and center of gravity. Assess the condition of the surface (loose, slope) and have a good idea of the lay of the land. Keep a good distance away from dropoffs. The second accident was a close call. Darkness, dust, fog, smoke, and sun may all obscure hazards ahead in the road. Use sunglasses during the day and avoid traveling faster at night than your lights or goggles allow you to see. Slow down.

(4) Other Issues.

(a) Seatbelt Use. Soldiers are choosing not to wear seatbelts because they want to be able to maneuver in the seat. The 18-inch belt extension for the three-point system helps make wearing the seatbelt easier, but Soldiers are still not using them. Soldiers are concerned with being able to react to enemy contact. This concern prompts Soldiers not to wear seatbelts when outside base camps. Enforce seatbelt use. To date, no Soldiers have been lost because they could not get out of the vehicle to engage an enemy; however, numerous fatalities and severe injuries have occurred because Soldiers were not wearing the seat-restraint system and were thrown or fell out of vehicles.

(b) Drivers Training. Many vehicles in use for OIF and OEF have been modified or hardened. These modifications change the way the vehicle performs. Accident reports indicate the causes for most accidents were following too close for environmental conditions; the speed limiting reaction time; limited visibility and failure to adjust vehicle spacing accordingly; and stopping in the middle of a dust cloud, leading to rear-end collisions. Consider expanding master drivers and drivers training programs to include training Soldiers to negotiate hazards and to incorporate lessons learned in the Middle East. If possible, allow drivers to gain experience in areas surrounding the base camp before they execute combat driving.

b. Explosives and Weapons.

- The Servicemember was removing the flash-bang device from his TA-50 when it exploded.
- The Servicemember was cleaning his TA-50. He removed a grenade, which exploded.

Do not become so familiar with ordnance that you lose your respect for its basic purpose. Run the check. Verify the safeing mechanism: when removing the item, verify that it stays in place. Make sure it is still there before you let go of it.

- While the Servicemember was performing maintenance on the .50-caliber weapon, a round went off.
- The Servicemember was on a rooftop performing a security mission when his weapon accidentally discharged, striking him in the foot and injuring him.
- During combat operations inside a Stryker, an M249 squad automatic weapon (SAW) accidentally discharged while the Servicemember was putting equipment away, which damaged the vehicle and injured the Servicemember.
- The Servicemember was attempting to mount an M249 weapon onto a HMMWV when it fired numerous rounds into his abdomen. The Servicemember was medically evacuated and died during treatment.
- Servicemember 2 was hit when Servicemember 1 fired his weapon during a dry-fire exercise. Servicemember 1 had failed to clear his weapon.

Negligent discharges are one of the largest injury-producing causes in the theater. It is your weapon. If it is loaded, you loaded it. Saying, "I didn't know it was loaded," is no excuse. Familiarity breeds lack of respect for the purpose of the weapon. Failure to "safe" or clear a weapon results in negligent discharges. The last two cases highlight the need to ensure that weapons must be cleared before remounting them into racks.

Weapon-muzzle discipline is also important. Always keep the weapon pointed in a safe direction. Horizontally mounted holsters and horizontally slung weapons increase the probability of a discharged round hitting someone. The probability of having a discharge increases when an individual is bored and fidgets with his or her weapon or—more seriously—plays "quick draw" or pretends to be a "Rambo." Keep focused. Maintain respect. Enforce discipline. Rotate positions.

- The Servicemember was stacking propellant and brass casings with local nationals when the propellant ignited, causing injuries.

Again, this case involved lack of respect, either due to carelessness or lack of knowledge. Three experienced EOD personnel lost their lives in Doha, Kuwait, in 1990. They lost respect for the material they were moving and were tossing damaged rounds to each other. All munitions operations require knowledgeable personnel. There is no margin for error and one accident is one too many. Minimize the number of personnel present. Have clear standards and be trained to meet those standards.

- A platoon detonated an explosive charge on the floor of a building to secure it, and the north wall crumbled, injuring four Servicemembers.

This last explosives incident shows that risk assessment needs to go further than the action and expected outcome. We train in solid buildings and expect similar construction when the time comes to use the skills and equipment. Damaged buildings, poor construction, cheap materials, and excessive charges can be factors in a full or partial building collapse. Think composite risk management.

- The Servicemember was the gunner in an M1114 on patrol when an IED exploded.

During stability and support operations, the use of IEDs by enemy forces has increased in effectiveness. Force protection was increased through initiatives to harden vehicles. Soldiers were not trained on reacting to IED threats. Vehicles cannot withstand blasts without changes to and hardening of the floors and sides. Incorporate an explosive hazards training course as mandatory predeployment training. Deploying units should evaluate the Explosives Safety (Letters from War) DVD produced by the United States Army Combat Readiness Center (PIN: 711716 (FOUO)). This DVD-based tool includes valuable tactics, techniques, and procedures (TTP) information from the IED task force in Iraq. All USAREUR major subordinate commands were given copies of this tool. Additional copies are available at local training support centers.

c. Fire.

- After pouring gasoline on some classified material, the Servicemember threw a match on the material. The flame flared up into the Servicemember's face, causing injury.
- Servicemember 2 used the wrong fuel to burn trash, and when Servicemember 1 lit the trash, it blew up, causing injuries.
- Two Servicemembers in sniper camouflage suits occupied an observation tower and somehow set fire to themselves and the tower, and suffered life-threatening burns.

Waste-disposal fires regularly injure Soldiers. Fires are routinely started with flammable liquids. Injuries occur for two basic reasons: the individual uses too much fuel and too short a match, or the flames die down and the individual decides to pour more fuel on the fire. Train and supervise individuals detailed to waste disposal. Light fires remotely using a torch or other method. Never pour more fluid on a fire that has already been lit. The same hazards concerning charcoal-grill fires apply. After the fire is lit, there are other potential hazards. An ammunition storage area was lost because Soldiers were burning waste. The wind carried the fire into dry grass. The fire rapidly went out of control and spread to the storage building. When deciding to set a fire, think "what if." Clear the area of combustible material, have firefighting resources nearby, and consider sparks and the wind conditions. The last case shows that clothing materials should not be assumed "nonflammable" and that care must be taken around heaters, open flames, and smoking materials.

- A 5-ton cargo truck was severely damaged by fire when combustible materials in unmarked multipacks overheated and ignited in the cargo area.

This incident is included as a reminder about hazardous material. Many storage and transportation rules were established because of accidents. Technical Manual (TM) 38-410 provides guidelines for segregating packaged goods in storage locations. AE Regulation 55-4 recommends that you never mix different hazardous material in the same box for transportation. It is too difficult for the average person to know what will or will not react dangerously with another substance. The supply line is too long to take chances. What would have happened if this incident occurred aboard a ship? How much valuable warfighting material would have been lost? Locate the HAZ 12-trained person and ensure his or her skills and knowledge are used.

Quarters and facility fires largely occur because of electrical overload or modified wiring. Sometimes we are forced into a specific building because of force-protection reasons or host-nation agreement. Occupancy demands forethought. Random interior construction creates a maze that is impossible to negotiate in an emergency, including an attack or a fire. Clear exit paths to adequate exterior doors must be established and maintained. Privacy is important, but it cannot come at the risk of mass casualties over a small smoky fire. Negotiate ways to make the best use of available space and configuration. Manage the fire load and the power-distribution system carefully. Appliance restrictions must be applied to prevent system overload. Add distribution wire to eliminate daisy-chained and branched extension cords. Ensure an adequate supply of visible fire extinguishers and have an alarm system. Be sure to bring enough fire extinguishers. Vehicle and shelter basic issue item (BII) fire extinguishers usually go with the equipment; but extinguishers for facilities, flightlines, fuel points, motorparks, and so on are also needed and rarely considered for the load plan. This created a very serious situation early in the buildup. You probably remember the highly publicized tent city fires in Kuwait. Large “fest” tents can become fully engulfed in flames in less than 3 minutes. There is great potential for loss associated with these fires. Not only are Soldiers at risk, but these tents also contain items difficult to replace, such as weapon systems and night vision devices. In addition, hazards such as ammunition, grenades, and other pyrotechnic devices present great dangers to anyone attempting to fight these fires.

Well-rehearsed evacuation plans and viable alarm systems are necessary to effectively prepare for this hazard. Frequent inspections for fire and electrical hazards will ensure Soldiers are given the best protection we can provide. A well-organized fire-attack plan is also critical to minimizing loss in the event of a fire.

d. Materials Handling.

- The Servicemember was struck by a crane hook.
- While sheets of steel were being stacked, one fell on a Servicemember.
- The Servicemember's finger was crushed between the pallet and the wall.
- The Servicemember injured his back while trying to lift the front end of a carousel by himself.
- While unloading supplies, the Servicemember placed his hand between the tines of a forklift and a pallet. The driver moved forward and crushed the Servicemember's finger.
- The Servicemember was unloading a reefer truck of food supplies when he slipped and fell from the truck.

Every Soldier is a rifleman. Likewise, every Soldier is a warehouse laborer (and a garbage man for that matter). This is another job that leaders assume anyone can do without conducting a risk assessment and without any instruction or supervision. In reality, material-handling injuries are frequent and often incapacitate Soldiers from doing their real job. Conducting a risk assessment and follow-through, personal protective equipment, teamwork, proper material-handling equipment, supervision, attention to detail, and avoiding jury-rigged solutions are some of the solutions. Wargame an operation before starting and consider the "what ifs." Bring handling tools and materials with you.

e. Electrical.

- While performing personal hygiene in a metal shower facility, the Servicemember was electrocuted.
- The Servicemember was preparing the evening meal when he reached for a water handle and was shocked.
- The Servicemember was washing vehicles when the pressure washer malfunctioned and shocked her, causing injuries.

The electrical situation is getting better, but accidents continue to occur because of incorrect installations or modifications and loss or lack of adequate grounding. Newer Army ground power systems are reasonably safe when properly connected and when the entire system is bonded and grounded. Local facility installations range from state-of-the-art to bare wires. Bring grounding rods and their slide hammers. The dry desert environment makes grounding a challenge. The United States Army Communications - Electronics Command (CECOM) publishes a field guide on equipment-grounding techniques that is tailored to specific environmental conditions. The CECOM field guide and other field electrical safety guidelines can be found at *http://www.monmouth.army.mil/cecom/safety/system/spublication.htm*. Mobile Electric Power engineers are also a good source of knowledge if they are available in your area.

- As the Servicemember began to remount his tank, he grabbed the base of the antenna and caused it to touch a powerline, which sent an electrical current through him.

Vehicle-mounted antenna contact with overhead electric lines is a longstanding problem in the central region, especially at electric streetcar and rail crossings. Long antennas on tall vehicles, such as tracked vehicles and heavy expanded mobility tactical trucks (HEMTTs), are a challenge. The safest practice is to keep antennas tied down. However, because the desert is a challenging communications environment, the temptation to keep antennas erect is great. This is a case for situational awareness. Always look up when preparing to mount or dismount a vehicle. The vehicle may be charged and waiting for a person to complete the path to ground. Never use an antenna as a handhold. Keying the microphone can cause injury either directly or by causing you to fall away.

f. Heaters and Stoves.

- A kerosene heater fell over, causing a fire and injuring the Servicemember.

Desert nights get cold and heating is necessary. Military-standard stoves (AE Pam 385-15) are the least-risky solution. Bring serviceable units. Install and operate them in accordance with TM instructions. Carbon monoxide (CO) is a significant concern in closed spaces heated with unvented or malfunctioning heaters or stoves.

g. Injuries.

- The Servicemember fell three stories and landed on a brick after tying a tow strap to a sandbag on the building roof and attempting to rappel down the side.
- The Servicemember was playing Frisbee. He jumped to get the Frisbee and fell on his right shoulder, injuring himself.
- The Servicemember was horseplaying with another Soldier when the Servicemember lost his balance, fell, and dislocated his shoulder.
- The Servicemember was walking to his living quarters in the dark when he twisted his ankle and injured himself.
- The Servicemember was working on a BFV when he jumped down from the front of the BFV, landed wrong, and fractured his ankle.
- The Servicemember was cutting a 4-by-4 piece of lumber with an electric circular saw while kneeling when the saw jammed and kicked back, cutting his leg.

The routine hazards targeted in the central region also exist in the OIF and OEF theaters. Enclosure 2, tab A, discusses these issues. Supervision and standards are control factors. During hot weather, Soldiers prefer to run after dark when it is cooler. Running (exercising) in the dark also causes injuries with trips on uneven ground disguised by shadows. Knife and saw accidents occur when using the wrong tool for the job, cutting toward the body, forcing dull blades, and failing to set the work on a suitable surface and at a compatible work height. Being in a hurry and taking shortcuts are also factors. The carpenter's rule is to *measure twice and cut once*. This can be modified to *think twice and cut safely*. Keep distance between your body and the blade.

- The Servicemember was inflating a tire with an airhose when the tire exploded. The rim hit the side of the cage and displaced the cage into the Servicemember who was next to it.
- The Servicemember was sitting on a tire while inflating it. The assembly ruptured, throwing the Servicemember into the air. The split ring struck another Servicemember in the chest and chin, causing injury.
- Three Servicemembers were replacing lugnuts on an M978 fueler tire when the outer ring popped off the tire, injuring all three Servicemembers.

Wheel repairs cause a disproportionate number of serious injuries. The first bullet shows that standard procedures minimize injuries. Maintenance must be by the book. Wheel assemblies, rings, and tires under pressure present an explosive force. Field maintenance with jury-rigged procedures invites injuries. Environmental damage to tires and wheel components add additional failure risk. Bring tire cages and inflation-chuck extensions. Stay out of the flight path and execute to standard.

- The Servicemember punctured her hand with a nail, did not seek immediate medical attention, and was later hospitalized for an infection.

This last injury raises an important point. The risk of infection is elevated downrange. It is important to clean all wounds as soon as possible, keep them clean, and know the signs of infection. Do not hesitate to seek medical aid; in deployed environments, an infection can get serious very fast.

h. Heat Injury.

- The Servicemember suffered from heat exhaustion during tactical security operations.
- The Servicemember was on guard duty from 1200 to 1800. At 1815, he complained of being hot and his speech became slurred. The Servicemember suffered a heat injury.
- The Servicemember became dehydrated and passed out while burning trash.
- The Soldier conducted combat lifesaver training all day, then suffered a heat injury.

Heat injuries can occur both while carrying out the mission and during training. Tab K to this enclosure provides prevention information from previous campaigns.

i. Fatigue. Sleep deprivation results in fatigue. Fatigue reduces awareness and reaction time, two things that can be deadly under the wrong circumstances. Tab B to this enclosure discusses the issues.

3. A *Hooah!* attitude gives the American Soldier an edge, but it can also blur the line between risk-taking and risk management. Hold tight to standards and enforce them. They still apply, even in a deployed environment. Remember that the risk-reduction process in Iraq and Afghanistan is exactly the same as it is in Schweinfurt or Baumholder. Ask yourself, "*What will take my Soldiers out of the battle?"* Identify the hazards, eliminate those you can, assess and minimize or accept the risk for those you cannot, implement controls, and continuously reevaluate. Do it every time conditions change, all the time, for a successful mission.

SLEEP MANAGEMENT AND SOLDIER READINESS: A GUIDE FOR LEADERS AND SOLDIERS

This tab is based on an article written by Captain Justin Curry, a psychologist at the United States Army Center for Health Promotion and Preventive Medicine.

As with food, water, and air, sleep is a necessity. When Soldiers do not get enough sleep, their performance suffers and everyone is put at risk. The effects of sleep deprivation sneak up on us. When Soldiers do not get enough sleep, their abilities are diminished and their performance decreases. Sleep deprivations may lead to—

- Falling asleep at the wheel and causing a vehicle rollover.
- Administering the wrong medicine or the wrong dose.
- Failing to recognize a threat or reacting too slowly to it.
- Transposing digits while entering coordinates into a fire-control system.

A sleep-deprived Soldier may make bad tactical decisions. The bottom line is that sleep deprivation can get Soldiers killed.

Sleep Deprivation and Performance

The longer Soldiers go without sleep, the poorer their performance on any number of tasks. In general, a person can sustain normal performance without noticeable impairment for about 16 hours after waking up. After 16 hours without sleep, there is a noticeable decrease in performance. After being awake for 24 hours, the reaction time is worse than being legally intoxicated. After 28 hours without sleep, their performance becomes significantly impaired and the likelihood of them making critical errors rises to an unacceptable level.

Sleep Management

To sustain their performance, Soldiers need at least 6 and preferably 7 or 8 hours of sleep out of every 24. Soldier performance will degrade over time with less sleep than 6 hours. Getting 4 to 6 hours of sleep every 24 hours will keep Soldiers in the Amber zone (where the risk for mission-critical errors is increased but still at acceptable levels) for periods of up to several weeks. Getting less than 4 hours of sleep will keep Soldiers in the Red Zone (where the risk for mission-critical errors is unacceptably high).

Sleep does not have to be continuous. Although it is preferred that Soldiers have uninterrupted sleep time, several shorter sleep periods that add up to 6 to 8 hours will likely be adequate.

Tips for Soldiers

- Do not sleep in areas where there is regular activity.
- When sleeping, minimize exposure to noise and light; wear earplugs and use blackout shades.
- Avoid over-the-counter “sleep aids,” which cause grogginess, but not actual sleep.
- Sleep whenever possible. Even a little sleep is better than none. Several “catnaps” can add-up quickly.

Tips for Leaders

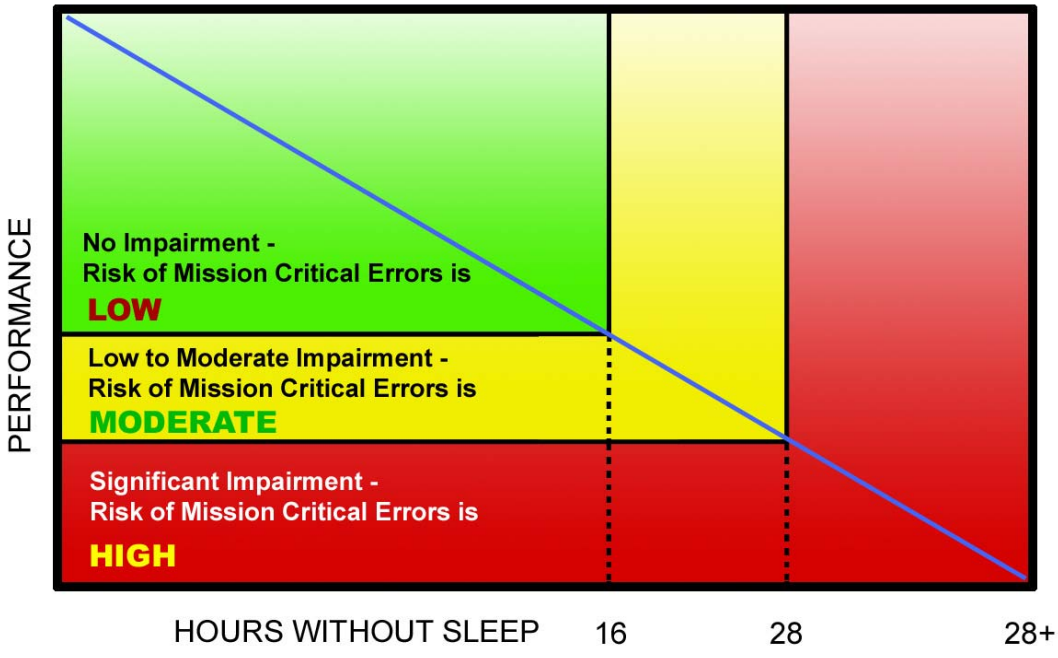
- Develop a unit sleep-management program that gives Soldiers at least 6 and preferably 7 to 8 hours to sleep out of every 24.
- Soldiers trying to sleep during the day require longer (or more frequent) opportunities to sleep to compensate for the body's normal reaction to disruption of the sleep cycle.
- Never put Soldiers in a position where they must choose between sleep and something else they would enjoy.
- Arrange sleep schedules that give Soldiers opportunities to sleep at a consistent time.

If Sleep Loss Cannot be Avoided

- Use caffeine; drink the equivalent of two cups of coffee (about 200 milligrams of caffeine) every 2 to 4 hours.
- Caffeine use as described above will help maintain performance, even in the face of moderate sleep loss.

Remember: Sleep is a Necessity

- Your performance begins to suffer as soon as you start losing sleep.
- If you are struggling to stay awake, then your ability to function is already impaired.



IONIZING RADIATION SAFETY PROGRAM

1. Ionizing radiations (x rays, gamma rays, and particles emitted by radioactive material) pose a potential threat to people and the environment and are regulated by the Army and Federal law. This potential for harm requires the Army to have an ionizing radiation safety program consisting of two parts. The first part involves protecting people and the environment from the harmful affects of ionizing radiation. The second part involves compliance with the regulations and licenses governing ionizing radiation use.

2. Army equipment is provided by commodity commands such as the United States Army Tank-Automotive and Armaments Command and the United States Army Communication-Electronic Command. To field equipment containing radioactive materials, commodity commands must first obtain permission from the Nuclear Regulatory Commission (NRC) by obtaining a license. This license specifies the use, maintenance, storage, disposal, and personnel training required to use the material. Once issued, the license holder (licensee) is obligated to do what the license says.

3. The first part of the ionizing radiation safety program is in good shape. Army-fielded equipment containing radioactive material is designed to protect Army personnel and the environment from harmful effects before the equipment is fielded. The equipment is being used according to an NRC license, so any harmful effects are well controlled.

4. The Army is privileged to use ionizing radiation while conducting its business. The Army must protect its privileges, because using radioactive material substantially improves mission capability and mission safety. Regulatory and license compliance requires Army units to train personnel, to strictly control radioactive material, and to comply with license conditions by following the applicable technical manuals and technical bulletins. This needs our attention.

a. Commanders must have trained laser range safety officers (LRSOs). Personnel may be trained by attending LRSO classes provided through the USAREUR Occupational Safety and Health Office or the Health Physics Division, United States Army Center for Health Promotion and Preventive Medicine - Europe (USACHPPMEUR). LRSO training availability and contact information is available on the radiation subpage of the USAREUR Safety website at *http:// www.per.hqusareur.army.mil* (click on *Safety*, *Radiation*, then *Training* (on the left)).

b. Commanders must maintain strict control of licensed unit equipment to prevent the loss or theft of radioactive material. If material is lost or stolen, this must be reported immediately.

(1) All Army licenses require an annual physical inventory of radioactive materials. Commanders must physically inventory unit radioactive material each year. The results of the annual inventory must be maintained by the commanders for 3 years. A copy of the physical inventory must be sent to the installation radiation safety officer for inclusion in installation radiation safety officer records.

(2) NRC regulations require that any radioactive material that is lost or stolen be reported to the licensee promptly (The licensee has 30 days after the time of the loss or theft to have a written report at the NRC.). Commanders must immediately report the loss or theft to the installation radiation safety officer, who in turn will report this through the chain of command to the licensee.

c. NRC licenses require maintenance to be performed in accordance with technical manuals and technical bulletins. Commanders must ensure only authorized maintenance is performed by unit maintenance personnel.

5. Commanders in the Army in Europe must have trained LRSOs, maintain strict accountability of licensed radioactive materials, and ensure only authorized maintenance is performed on commodity equipment.

PRODUCT QUALITY DEFICIENCY REPORTING AND EQUIPMENT SAFETY

We have all been there. You are using a piece of equipment or performing maintenance and say, "This piece of equipment or part could really be improved." The course of action to report equipment-quality deficiencies and get them fixed is the Army's Product Quality Deficiency Reporting (PQDR) System.

The priority of the system is on defects that could cause death, injury, loss of a system or mission or serious damage. You and your fellow Soldiers have a duty to report such defects. PQDRs may easily be done online at *https://aeps.ria.army.mil/aepspublic.cfm*.

Maintainers and users must be current on this improved system so this would be an excellent topic for Sergeant's Time, especially in maintenance units. The system is described in the presentation put together for us by the USAREUR Safety Division with the help of the Army Aviation and Missile Command. All maintenance units should receive training on the subject as part of the Winter Safety Campaign. Slides are available on the USAREUR Safety website at *http://www.per.hqusareur.army.mil/services/safetydivision/usareur_winter_safety_campaign.htm*.

Unless the materiel side of the Army is informed of our problems with the equipment and procedures they provide, nothing will get fixed. They welcome the opportunity to get your feedback and provide the Soldier the best equipment possible. Complaints without action are not going to get any results.

DO YOU REALLY KNOW IF THAT WEAPON IS LOADED?

About a year ago, the Sergeant Major of the Army published an article in Countermeasure magazine discussing negligent weapon discharges. It is time to revisit this serious issue. Since the beginning of the Global War on Terrorism, 25 Soldiers have died and another 14 have suffered permanent disabilities because of negligent weapon discharges. In almost every case, another member of the Soldier's unit was responsible. How tragic it is to survive the battlefield only to be shot by your battle buddy.

Although these numbers are relatively low, even one fatality is unacceptable. We must identify the problem, establish solutions, and train our Soldiers so we will never have to tell another family member that his or her loved one died because of "friendly fire." Negligent discharge is a core safety issue. Many discharges occurred in base camps or areas where the weapons-control status was "green," except for Soldiers in a security role.

In almost every case, Soldiers did not follow established procedures on when, where, and how to clear their weapons. We call these procedures "standards." Clearing barrels are at the entrances of compounds and base camps, at the base of guard towers, and at helipads. Clearing barrels are the focal point for leaders such as officers in charge, noncommissioned officers in charge, and convoy commanders to ensure their Soldiers' weapons are cleared and in green status.

In one incident a Soldier was shot and killed in his tent because another Soldier did not clear his weapon when his team returned from a mission. This Soldier was riding in the back of a truck with several other Soldiers and was asleep during the clearing process. These Soldiers were not required to dismount the truck; instead, they handed their weapons to another Soldier on the ground to clear them. Unfortunately, one weapon—the one involved in the shooting—was missed. In this incident, unit leaders failed to hold Soldiers responsible for clearing their weapons and noncommissioned officers responsible for supervising the process. The result of leaders not enforcing standards and allowing Soldiers to become complacent was the needless death of a young Soldier.

In another incident, a Soldier was killed when he was shot in the head by a 25-millimeter (mm) cannon on an M2A2 Bradley Fighting Vehicle (BFV). The Soldier and another Soldier were standing approximately 20 feet in front of the BFV, which was positioned on the unit perimeter for security operations. The crew kept the 25mm cannon loaded with a "ghost round" cycled. The BFV was unmanned until the driver entered the vehicle to start the engine. When he turned on the master power switch, the 25mm cannon cycled and fired a round, killing the Soldier. The other Soldier was severely wounded in the neck by a discarding petal from the projectile.

We must emphasize that we train as we are going to fight. In this incident, unit leaders allowed Soldiers to become complacent about the potential danger associated with weapons orientation. Unit leaders did not enforce keeping loaded crew-served or vehicle-mounted weapons manned at all times.

Experienced Soldiers know their weapons are lethal and ensure weapon muzzles are never pointed at anyone. These Soldiers instinctively practice muzzle awareness all the time. When in the ready position, experienced Soldiers keep their trigger finger poised alongside their weapon's magazine well and off the trigger until they need, or anticipate the need, to shoot. How do Soldiers become seasoned and skilled? The answer is training and experience.

Training enforces important disciplines such as muzzle awareness and trigger-finger position. Leaders must teach and enforce the right standards and never allow Soldiers to become complacent in weapons handling. Weapons handling is a perishable skill. Repetitive, focused training builds experience and creates Soldiers who are inherently safe.

Long periods of time between training events or during combat operations (when it may be hard to train) can lead to complacency. Recurring focused training on weapons handling and unit standing operating procedures can combat complacency and reinforce established standards. We need the discipline of first-line leaders along with the oversight of senior leaders to halt these needless, tragic deaths.

Negligent discharges often occur because of the following:

- Inattentiveness.
- Indiscipline.
- Ineffective supervision.
- Insufficient training.
- Lack of muzzle awareness and discipline.
- Negligence.

These reasons caused nine Soldiers to be killed or seriously wounded while cleaning their weapons. Soldiers not clearing their weapons and maintaining a weapons control green status in designated areas killed or wounded 18 others. Twelve Soldiers were injured or killed because of a lack of muzzle awareness and discipline, coupled with unintentionally pulling the trigger. Learn, teach, and enforce the standard.

If a unit does not have well-established standards and discipline before it deploys, it will have difficulty establishing standards after it is deployed. Ultimately, it is Soldiers who pay the price in needless deaths and accidents.

The Soldiers we train today will be tomorrow's leaders, just as today's leaders will be tomorrow's senior leaders. We must give our Soldiers and leaders the tools, techniques, and procedures to prepare them for that task.

WEAPON-MUZZLE DISCIPLINE

Range-safety subject-matter experts are constantly surveying ranges and have expressed concern in the area of weapon-muzzle discipline. People who pass through security checkpoints may have observed Soldiers pointing their weapons improperly. If you see a Soldier pointing a weapon in an unsafe manner, speak up! Safety in the handling of firearms requires good training and discipline. We cannot tolerate any deaths or injuries as a result of negligent discharge. Notice the use of the term "negligent." There are no "accidental" discharges; discharges are either intentional or negligent and all have serious consequences. Soldier Training Publication 21-1-SMCT provides the basics of weapon safety.

The information below was taken from a Countermeasure magazine article in which the Sergeant Major of the Army discussed fatalities from negligent discharge and the need for weapon discipline at home station before going downrange.

The rules of weapon safety are fairly universal—not just for the Army.

Weapon safety is a collection of rules and recommendations that are applied when handling firearms. The purpose of weapon safety is to eliminate or minimize the risks of unintentional damage, injury, and death caused by improperly handling firearms.

Weapon Safety Rules and Mindset

Safe weapon use:
The weapon is pointed at the ground and the handler's finger is off the trigger

Weapon safety training seeks to instill a certain mindset and appropriate habits or rules. The mindset is that firearms are inherently dangerous and must always be handled with care. Handlers are taught to treat firearms with respect for their destructive capabilities and are strongly discouraged from playing or toying with firearms, which is a common cause of accidents.

The rules of weapon safety follow this mindset. The following rules are those most commonly taught during weapon safety training:

- Always treat firearms as if they were loaded, not safetied, and ready to fire.
- Always point the muzzle away from anything and everything that you do not intend to fire on.
- Always keep your fingers away from the trigger until you are ready to fire.
- Always be sure of your target and its surroundings.

Treat firearms as if they were loaded

This rule requires a proper mindset rather than a specific habit. Many firearm accidents result from the handler believing that a firearm is emptied, safetied, or otherwise not ready to fire when it is in fact ready. If a handler always treats firearms as capable of being fired at any time, the handler is more likely to take precautions to prevent an unintentional discharge and to avoid damage or injury if one does occur.

The rule to remember is "The weapon is always loaded." The purpose of this rule is to discourage thinking that "I know my weapon is empty, so *some unsafe practice* is okay." Inexperienced handlers often think this way, and accidents happen as a result.

Point the muzzle away from non-targets

This rule is intended to minimize the damage caused by an unintended discharge. The first rule teaches that a firearm must be assumed to be ready to fire. The second rule goes beyond that and says "Since the firearm might fire, assume that it will and make sure no harm occurs when it does."

Any playing with firearms is prohibited. Playfully pointing firearms at people or other non-targets violates this rule.

Two "safe" directions at which to point the muzzle are upwards (at the sky) and downwards (at the ground). Both have their advantages and disadvantages. Firing at the ground may result in a ricochet or cause hazardous fragments to be flung at people or material. Aiming upwards eliminates this risk but replaces it with the risk that the bullet may cause damage when it comes down. Several accidents have been caused by discharging firearms into the air. The muzzle may also inadvertently be pointed at a non-target, such as someone's head or an aircraft.

When passing a firearm to another person, it should be passed so that the muzzle of the weapon does not point at or "flag" the recipient.

Keep fingers off the trigger

This rule is intended to prevent negligent discharges. Normally a firearm is discharged by pressing its trigger. A handler's finger may involuntarily move for any of several reasons: being startled, not paying full attention to one's body movements, or physiological reasons beyond conscious control, such as spasms. Handlers are therefore taught to minimize the harmful effects of such a motion by keeping their finger off the trigger. The trigger guard and the area above the trigger of a firearm present a natural point for handlers to keep their fingers out straight alongside the weapon, so as not to violate this rule (as shown in the picture).

Be sure of your target

This rule is intended to eliminate or minimize damage to non-targets when a firearm is intentionally discharged. Unintended damage may occur if a non-target is misidentified as a target or if the bullet hits something or someone other than the intended target.

Handlers are taught that they must positively identify their target as valid. If the situation allows it, all of the above weapon safety rules must be observed until the target is identified.

Even when firing at a valid target, unintended targets may still be hit. A bullet may miss the intended target and hit something else. The bullet may also go through the target and hit a non-target behind it. Therefore, the handler must observe what is close to and behind the target. If non-targets are at risk of being hit by the bullet, the handler may need to refrain from firing.

This rule may create situations that present dilemmas for a handler. These situations may include (for example) a police officer in a riot or a Soldier in a situation where civilians are near the enemy. Indecision or misjudgment of the handler's abilities in such a situation may cause undesired outcomes, such as injury to the handler or the handler violating rules of engagement and causing unintended damage. To prevent such outcomes, the handler must be properly trained. This makes it easier for the handler to make appropriate decisions, even if given little time or when under severe stress.

CIVILIAN JOB-HAZARD ANALYSIS AND HEALTH EVALUATIONS

1. Job-Hazard Analysis.

a. In accordance with the Code of Federal Regulations, Title 29, part 1910.132, subpart I, and AE Regulation 385-29, supervisors at all levels are responsible for conducting job-hazard analyses for DA and local national civilian employees.

b. An analysis may be performed for a single workplace or for a group of employees performing the same tasks (for example, firefighters, housing inspectors). The analysis must be documented, maintained on file by the supervisor, and updated as work duties change.

2. Minimum Requirements. Job-hazard analyses must evaluate employee working conditions and determine which occupational protective measures and occupational physical examinations are required by evaluating the hazards that affect employees at the worksite or in the performance of their duties.

3. Sources of Hazards. A hazard can arise from the following:

a. The layout of the workplace or workstation, and equipment in the workplace or workstation.

b. Exposure to physical, chemical, or biological hazards.

c. Organization, selection, and application of work assets (especially materials, machinery, equipment, and facilities) and the handling of these assets.

d. The organization of the work and fabrication process, work procedures, workhours, and the interaction of these elements.

e. Inadequate qualification and insufficient instruction of employees.

4. Employee Medical Examinations. The USACHPPMEUR will conduct medical examinations for civilians in the Army in Europe who require an examination under either U.S. or host-nation law. Supervisors will ensure that USACHPPMEUR occupational health nurses receive the results of job-hazard analyses so they can help the supervisor determine appropriate medical examinations and schedule physical examination for employees.

5. Resources.

a. The following are available to help the supervisor with job-hazard analyses. These supporting disciplines can also help supervisors analyze work conditions and the work environment. (Support must be requested and coordinated by supervisors when necessary, depending on the type of work being performed.)

(1) Base support battalion (BSB) and unit or organization safety offices.

(2) Occupational health nurses.

(3) Industrial hygienist.

b. Supervisor job-hazard analysis training will be conducted by the USAREUR Safety and Occupational Health Office at each BSB. Training dates and more details will be announced on the USAREUR Safety website (*http://www.per.hqusareur.army.mil/services/safetydivision/usareur_winter_safety_campaign.htm*).

6. Documentation and Reporting. All required documents showing the results of the evaluation of hazards, determined occupational protective measures, physical examinations required, and the result of their review must be kept on file. In case of similar hazard situations, it is sufficient if the documents include summarized information. USAREUR MSCs and IMA-EURO will send a completed "summary of assessment" for their civilian workforce by the end of each quarter to the USAREUR Safety and Occupational Health Office (Mr. Rieth). An electronic format for these summaries is available on the USAREUR Safety website (*http://www.per.hqusareur.army.mil/services/safetydivision/usareur_winter_safety_campaign.htm*).

7. Goal. The goal is for every Army in Europe organization to review and update or perform and document a job-hazard analysis on 25 percent of their employees each fiscal quarter, reaching 100 percent by 30 September 2006.

COLD-WEATHER INJURY PREVENTION

The threat of cold-weather injuries exists not only for troops who are deployed or participating in field exercises, but also for personnel in garrison. Cold-weather injuries can occur even when temperatures are not freezing. Cold-casualty prevention is a command responsibility. The prevention of cold-weather injuries requires vigorous command emphasis.

a. A comprehensive cold-weather injury prevention program should follow the principles of risk management by identifying hazards, assessing the hazards in terms of severity and probability, and implementing appropriate controls to mitigate hazards. Personnel must recognize conditions that are risk factors for cold-weather injuries, know which preventive measures to use to reduce risk, recognize the types of cold-weather injuries, and be able to provide proper treatment.

b. Spot-checking and supervision by first-line leaders should be used to ensure control measures are being implemented.

c. Unit commanders must conduct a risk assessment for physical training (PT) under winter conditions. Unit commanders should consider specific additions to the standard PT uniform (for example, balaclava, black stocking cap, gloves, neck gaiters) based on weather conditions. Minimum cold-weather PT uniform guidance should correspond to the wind-chill categories indicated below:

COLD-WEATHER RISK	PT UNIFORM GUIDANCE
Little danger	Physical fitness uniform, sweat top and bottom, black knit cap, black gloves with inserts, neck gaiter
Increasing danger	Physical fitness uniform, sweat top and bottom, polypropylene top and bottom, balaclava, trigger-finger mittens
Great danger	Add extended cold weather clothing system (ECWCS) mittens, parka

d. References that provide information on how to anticipate, prevent, and manage the adverse effects of cold weather include the following:

(1) FM 4-25.11, First Aid.

(2) FM 21-10, Field Hygiene and Sanitation.

(3) TC 21-3, Soldiers Handbook for Individual Operations and Survival in Cold-Weather Areas.

(4) Graphic Training Aid 08-06-012, Adverse Effects of Cold.

(5) United States Army Research Institute of Environmental Medicine Technical Note 02-2, Sustaining Health & Performance in Cold Weather Operations (*http://www.usariem.army.mil/download/cold0102.pdf*).

(6) AE Pamphlet 385-15, Leader's Operational Accident-Prevention Guide.

(7) USACHPPMEUR website (*http://chppm-www.apgea.army.mil/coldinjury/*).

HEATERS AND CARBON MONOXIDE PREVENTION

1. Heaters.

a. Unvented heaters are not authorized. This prohibition applies in guard shacks; tents; life-support areas; morale, welfare, and recreation facilities; military-owned demountable containers (MILVANs); and other locations that require heaters.

b. Vented heaters include forced-air heaters that have fuel, ignition, and heat sources located outside of tents and structures. AE Pamphlet 385-15 lists approved heaters belonging to the family of space heaters (FOSH) with national stock numbers (NSNs) and descriptions. Units must program to remove other heaters from service.

c. Commercial off-the-shelf (COTS) and electric heaters may be authorized if they are approved by a reputable national standards organization (for example, Underwriters Laboratories (UL), American National Standards Institute (ANSI), International Organization for Standardization (ISO)) or have a "CE" (*Conformité Européenne*) label indicating that the heater is approved for use. If electric heaters are used outdoors or in a damp environment, a ground fault interrupter must be installed between the heater and the power source.

d. TM 10-4500-200-13 provides operating instructions and preventive-maintenance checklists for using M1941 type I and II and M1950 solid- or liquid-fuel space heaters. Heater model H-45 type I and type II operation and maintenance instructions are in TM 9-4520-257-12&P. Personnel will consult TM 9-4520-257-12&P or TM 10-4500-200-13 when installing space heaters.

2. Carbon Monoxide and Asphyxiation.

a. CO is a clear, odorless gas that forms during incomplete combustion. When CO enters a person's body, it takes oxygen out of the blood. Unvented heaters and leaking vented heaters can release dangerous quantities of CO. If the heater is in an enclosed space, the concentration can build up. Examples of enclosed spaces include closed shelters, closed garages, and closed tents. Sitting or sleeping in a vehicle with the windows and doors shut and the motor idling (for example, to provide heat when stuck in a traffic jam or snow, or while asleep) can also lead to CO poisoning. First aid for CO poisoning is to get the victim away from the CO and into fresh air where the CO concentration in the body can lower itself.

b. Asphyxiation is a condition caused by a lack of oxygen in the air being breathed. A vented heater in perfect running order can cause this condition if a tent (such as the squad tent) or room is tightly closed. Fire requires oxygen to burn and can burn using less oxygen than a human needs to survive. Therefore, a tent or room with a vented heater also must be ventilated to avoid this condition ("make-up air").

UNIT SAFETY CERTIFICATION

1. Unit Safety Certification Requirements. USAREUR units that redeploy during the Winter Safety Campaign (1 Oct 05 through 30 Apr 06) or that redeploy before 1 October 2005 and do not achieve certification status during the USAREUR 2005 Summer Safety Campaign must achieve USAREUR unit safety certification within their retraining period. Units achieve safety certification by providing specified safety training to the commander and the senior NCO, the safety officer or NCO, and by maintaining access to important websites providing safety information. The USAREUR Safety and Occupational Health Office will award certificates to units on completion of certification requirements. Unit safety certification must be maintained as personnel rotate. Certification requirements are as follows:

a. Each brigade, battalion, and company commander must complete the Commander's Safety Course. The United States Army Combat Readiness Center (USACRC) has established a new course that is available at *https://safetylms.army.mil*.

b. Each senior NCO at each command level must complete the Commander's Safety Course, the Senior NCO Safety Course, or the CATC Safety Officer/NCO Course (SOC 40).

c. Each unit must have at least one SOC 40-trained additional-duty safety officer or NCO on orders and working in his or her area of responsibility.

d. Leaders must understand the concept of the Cody Model and be familiar with where to find tools to compensate for "gaps" in experience or knowledge. General Cody, the Vice Chief of Staff of the Army, argues that a significant part of the challenge with lowering the accident rate is related to the depth of knowledge and experience of the leadership closest to the troops. With that simple revelation, the Army safety leadership began a massive tool-development effort to provide junior leaders "instant expertise" and help solve our most serious problems. These tools must be coupled with mentoring using a "three-deep leadership" method ("contact-level" leadership backed up with two levels of active leader involvement and associated guidance, mentoring, and assistance). The goal is good decision-making at the right time. Therefore, as part of unit safety certification, commanders will ensure that subordinates have ready access to the risk-management tools available on the USACRC and USAREUR Safety websites.

e. Safety officers and safety NCOs must register for the Eur-Safety Net List Server. Aviation safety officers and NCOs should also register for the USAREUR Aviation Safety Officer List Server.

f. Safety officers and safety NCOs must register with and use the USACRC Risk Management Information System (RMIS) and the Accident Reporting Automation System (ARAS). (5th Signal Command, 7th Army Reserve Command, and the United States Army Europe Regional Medical Command (ERMC), which officially report accidents to their respective parent major Army command (MACOM), must follow accident-reporting guidance issued by their headquarters.)

g. Unit publications clerks must verify subscriptions to the USACRC publications Countermeasure, Impax, and Flightfax (for aviation units).

2. Requesting Certification. Units that have met all the USAREUR unit safety certification requirements in paragraph 1 will request certification by submitting a memorandum through their chain of command to the USAREUR Safety and Occupational Health Office. Figure 1 provides the format for the memorandum.

LETTERHEAD

Office Symbol *date*

MEMORANDUM THRU *Unit's Higher Headquarters*
FOR USAREUR G1 (AEAGA-S), Unit 29351, APO AE 09014-9351

SUBJECT: Request for USAREUR Unit Safety Certification

1. Reference memorandum, HQ USAREUR/7A, AEAGA-S, 10 August 2005, subject: Army in Europe Winter 2005-2006 Safety Campaign.

2. I certify that *unit name* meets the seven requirements specified in enclosure 3, tab J, of the Army in Europe Winter 2005-2006 Safety Campaign.

a. I have completed the Commander's Safety Course.

b. My senior NCO, *grade and name*, has completed the (*select one*) Commander's Safety Course, Senior NCO Safety Course, *or* CATC Safety Officer/NCO Course (SOC 40).

c. My Safety Officer, *grade and name*, has completed SOC 40, is appointed on orders as the (*unit name*) Safety NCO, and is performing duties in this capacity.

d. My first-line leaders (sergeants and above) understand the Cody Model and know where to find tools to compensate for gaps in experience or knowledge. Specifically, they are familiar with (*specify*).

e. *Grade and name of safety officer* is registered for the Eur-Safety Net List Server and (*for aviation units*) the USAREUR Aviation Safety Officer List Server.

f. *Grade and name of safety officer* is registered and using the United States Army Combat Readiness Center Risk Mitigation Information System (RMIS) and is registered to use the Accident Reporting Automation System (ARAS).

g. The *unit name* is subscribed to the United States Army Combat Readiness Center Publications Countermeasure, Impax, and (*for aviation units*) Flightfax.

3. Documentation to support the information provided above is maintained by my safety officer and is available for review.

4. The point of contact for this action is *grade and name of safety officer*, DSN **xxx-xxxx** or e-mail: *name*@us.army.mil.

Unit Commander's
Signature Block

Figure 1. Request for USAREUR Unit Safety Certification

PREVIOUS CAMPAIGN INITIATIVE SUMMARY

1. The intent of the Army in Europe 2005-2006 Winter Safety Campaign is to create and maintain a robust and healthy safety program. The table below summarizes previous campaign initiatives that are applicable during this campaign, depending on the unit's category as indicated in enclosure 3. These functional areas continue to require emphasis, as applicable, to accomplish the campaign intent in unit mission areas. Commanders should review the list below and assess their unit's compliance with these requirements.

2. Tools are available to help with many of these initiatives. The online version of this memorandum includes links to these tools. To access the online version of this memorandum, log on to the USAREUR homepage (*http://www.hqusareur.army.mil*) and click on the Safety Campaign link or follow the *USAREUR Safety* link.

FUNCTIONAL AREAS AND OBJECTIVES	TOOLS AVAILABLE
Accident Reporting Comply with Army regulations; identify hazards.	Accident Reporting Automated System (ARAS) at *http://www.per.hqusareur.army.mil/services/safetydivision/accident_report1.htm*
Army Safety Campaign Comply with CSA directives to reduce Army losses.	Army Safety Campaign Plan at *https://crc.army.mil/CRC/crc_safety_program/campaignplan.pdf*
Individual POV Risk-Assessment Program Use the ASMIS-1 to assess trips in conjunction with the *Under the Oak Tree* process.	ASMIS-1 POV Module at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/asmis.htm* Driver's Risk Assessment Questionnaire at *http://www.per.hqusareur.army.mil/services/safetydivision/Drivers%20questionaire/Drivers%20Risk%20Questionnaire.xls*
Composite Risk Management Support the USACRC initiative to concentrate on all sources of loss, not only safety issues.	CRM information at *http://www.per.hqusareur.army.mil/services/safetydivision/risk_management.htm*
Convoy Training Verify that all personnel conducting convoy operations are trained.	Training materials at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/convoy_training.htm*

Family and Off Duty Reinforce the importance of safe behavior while off duty.	Additional information at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/summer_safety_off_duty.htm*
Field Storage of Ammunition and Explosives Follow guidance on field ammunition storage and on parking uploaded vehicles safely in a field environment.	Field Ammunition Storage at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/uploaded_vehicles_and_field_storage.htm* Force Protection Templates at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/uploaded_vehicles.htm*
Heat-Injury Prevention Prevent heat injuries.	Heat Injury Prevention Program at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/heat_injury_prevention.htm*
Motorcycle Safety Foundation Training Certificate Ensure that all military motorcycle operators in the Army in Europe have a current Motorcycle Safety Foundation card and receive post-deployment training on perishable skills (required every 3 years). Eliminate "grandfathered" untrained operators.	Motorcycle Safety Requirements at *http://www.per.hqusareur.army.mil/services/safetydivision/Motorcycle/New%20Motorcycle%20Safety%20Requirements.ppt*
Quarters Fires Emphasize the importantance of fire safety at home, especially during the holiday season. Consider incorporating fire-safety themes in unit training events.	Sample Fire Safety Briefing at *http://www.per.hqusareur.army.mil/services/safetydivision/Fire/QuartersFire.ppt*
Railhead and Security Escort Training Verify that all personnel supporting rail operations are properly trained.	Training materials at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/railhead.htm*.
Safety Awards Recognize units that have a good safety record.	Safety Award Information at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/awards1.htm*

Soldier Wellness Issues Address the following problem areas and ensure professional help is given to individuals who need it: • Drug and alcohol abuse • Drugged and drunk driving • Domestic violence • Suicide • Unattended alcohol deaths	Army Substance Abuse Program Information at *http://www.26thasg.heidelberg.army.mil/sites/services/ASAP/asapindex.htm* **NOTE:** Unit chaplains and unit ASAP program representatives can provide more information.
Under the Oak Tree Reestablish communication between Soldiers and their first-line supervisors.	Under the Oak Tree Process at *http://www.per.hqusareur.army.mil/services/safetydivision/Summer%20Safety/Campaign2005/under_the_oak_tree.htm*
Weapons Handling Ensure Soldiers know and follow DA and Army in Europe weapons-clearing procedures.	AE Pamphlet 385-15 AE Pamphlet 385-15-7